

INFORMAL SEQUENCE LISTING

NOVEL PROTEINS

PN7098

SEQ ID NO:1 >PN7098 (NT)

gccttggatttttcaggttttcatcctgatacttgtttacttttctggggcagaaaagctt
gcactaattgctctccatgggtggctaattttttcaagagcttgattttaccttacattca
taagctttgcaaaggaatgtttacaaagaaattgggaaatacaaaacaaaaacaaagagta
tcgtcagcagaaaaaggatcaagacttccccactgctggccagaccaaataccccaaatt
ttcttacactttttaaagcactgtaaagaagattgcaaagtgttcatccactcacaactt
atccactgaggaagacgaggccagtaaagagttttccctctcaccaacattcagttaccg
agtagctattgccaatggcctacaaaagaatgctaaagtaaccaccagtataatgagga
tctgcttcaagagctctcttcaatcgagagttcctactcagaatcattaaatgaactaag
gagtagcacagaaaaccaggcacaaatcaacacacacaatgccagttagacgcaacagaaa
gagttcaagcagccttgcaccctctgagggcagctctgacggggagcgtactctacatgg
cttaaaactgggagctttacgaaaactgagaaaatggaaaaagagtcaagaatgtgtctc
ctcagactcagagttaagcaccatgaaaaaatcctggggaataagaagtaagtctttgga
cagaactgtccgaaacccaaagacaaatgccctggagccagggttcagttcctctggctg
cattagccaaacacatgatgtcatggaaatgatctttaaggaacttcaggggaataagtca
gattgaaacagaacttttctgaactacgagggcacgtcaatgctctcaagcactccatcga
tgagatctccagcagtggtggaggttgtacaaagtgaattgagcagttgcgacacagggtt
tgtccagttctcgaggggaaactagagacatccatgattatattaagcacttaggtcatat
gggtagcaaggcaagcctgagatttttaaatgtgactgaagaaagatttgaatatgttga
aagcgtgggtgtaccaaattctaatagataaaatgggtttttcagatgcaccaaatagtat
taaaattgaatttgctcagaggataggacaccagagagactgccc aaatgcaaagcctcg
accatacttggtgtactttgaaaccctcaacaaagggttctgtcttaaaaaagtcata
taaaactcaaaggaacaggcattggaatctcaacagatattctaactcatgacatcagaga
aagaaaagagaaaagggtatccatcctcccagacatatgagagcatggctataaagttgtc
tactccagagccaaaaatcaagaagaacaattggcagtcacctgatgacagtgatgaaga
tcttgaatctgacctcaatagaaacagttacgctgtgctttccaagtcagagcttctaac
aaagggaagtacttccaagccaagctcaaaatcacacagtgctagatccaagaataaaac
tgctaatagcagcagaatttcaaataaatcagattatgataaaatctcctcacagttgcc
agaatcagatatcttggaaaagcaaaccacaaccattatgcagatgcaacacctctctg
gcactcacagagtgattttttcactgctaaacttagtcgttctgaatcagatttttccaa
atttgtgtcagttactcagaagatttttcagaaaatcagtttttactagaactaatgg
aagctctctcctgtcatcttcggaccgggagctatggcagaggaaacaggaaggaacagc
gacctgtatgacagtcaccaaggaccagcatttgaaatggaagtgttcagggtatccaagg
gcagactgaaactgaaaacacagaaactgtggatagtggaatgagtaatggcatgggtgtg
tgcattctggagaccggagtcattacagtgattctcagctctctttacatgaggatctttc
tccatggaaggaatggaatcaaggagctgatttaggcttggaattcatccaccaggaagg
ttttgattatgaaacaaacagtcctttttgaccaacagcttgatgtttacaataaagacct
agaatacttgggaaagtgccacagtgatcttcaagatgactcagagagctacgacttaac
tcaagatgacaattcttctccatgccctggcttggaataatgaaccacaaggccagtggtt
tggccaatatgattcttatcaggagctaatctaatgagctataccaaaatcaaaacca
gttgtccatgatgtatcgaagtc aaagtgaattgcaaagtgatgattcagaggatgcccc

accCAAatcatggcatagtcgattaagcattgacctttctgataagactttcagcttccc
aaaatttggatctacactgcagagggctaatacagccttggaagtagtatggaacaaaag
cacacagagtctgagtgggtatgaggacagtggctcttcattaatggggagatttcggac
attatctcaatcaactgcaaatgagtcaagtaccacacttgactctgatgtctacacgga
gccctattactataaagcagaggatgaggaagattatactgaaccagtggctgacaatga
aacagattatgttgaagtcattggaacaagtccttgctaaactagaaaacaggactagtat
tactgaaacagatgaacaaatgcaagcatatgatcacctttcatatgaaacaccttatga
aacccccacaagatgaggggttatgatgggtccagcagatgatatgggttagtgaagaggggtt
agaacccttaaatgaaacatcagctgagatggaaataagagaagatgaaaacaaaacat
tcctgaacagccagtggagatcaciaagccaaagagaattcgtccttctttcaaagaagc
agctttaagggcctataaaaagcaaatggcagagttggaagagaagatcctggctggaga
tagcagttctgtggatgaaaaggctcgaatagtaagtggcaatgatttggatgcttccaa
atcttctgcactccaggtgtgtgggtggggtggaggtggactttatgggtattgacagcat
gccggatcttcgcagaaaaaaaactttgcctattgtccgagatgtggccatgaccctggc
tgcccggaatctggactctccctggctatgggtgattaggacatccctaaataatgagga
actgaaaatgcacgtcttcaagaagaccttgcaggcactgatctaccctatgtcttctac
catcccacacaattttgaggtctggacggctaccacacccacctactgttatgagtgtga
agggctcctgtggggcattgcaaggcaaggcatgaagtgtctggagtgtggagtgaatg
ccacgaaaagtgtcaggacctgctaaacgctgactgcttgcagagagcagcagaaaagag
ttctaacaatgggtgccgaagacaagactcagaccattattacagcaatgaaagaaagaat
gaagatcaggagaaaaaacgggccagaagtatttgaagtaatccaggaaatgtttcagat
ttctaagaagattttgtgcagtttaciaaaggcgccaaacagagtggtactggatgggac
atctaagtgggtctgcaaaaataaccatcacagtgggtttctgcacaagg

SEQ ID NO:2 >PN7098 (AA)

MVANFFKSLILPYIHKLCCKGMFTKKLGNTNKNKEYRQQKKDQDFPTAGQTKSPKFSYTFK
STVKKIAKCSSTHNLSTEEDEASKEFSLSPFTFSYRVAIANGLOKNAKVTTSDNEDLLQEL
SSIESSYSESLNELRSSTENQAQSTHTMPVRRNRKSSSSSLAPSEGSSDGERTLHGLKLGA
LRKLRKWKKSQECVSSDSELSTMKKSWSGIRSKSLDRTVRNPKTNALPEGFSSSGCISQTH
DVMEMIFKELQGISQIETELSELRGHVNALKHSIDEISSSVEVVQSEIEQLRTGFVQSR
ETRDIHDYIKHLGHMGSKASLRFLNVTEERFEYVESVVYQILIDKMGFSDAPNAIKIEFA
QRIGHQRDCPNAKPRPILVYFETPQQRDSVLKKSXYKLKGTGIGISTDILTHDIRERKEKG
IPSSQTYESMAIKLSTPEPKIKKNNWQSPDDSDLEDLNRNSYAVLSKSELLTKGSTS
KPSSKSHSARSKNKTANSSRISNKSDYDKISSQLPESDILEKQTTTHYADATPLWHSQSD
FFTAKLSRSESDFSKLCQSYSEDFSENQFFTRTNGSSLLSSSDRELWQRKQEGTATLYDS
PKDQHLNGSVQGIQGGTETENTETVDSGMSGMVCASGDRSHYSDSQLSLHEDLSPWKEW
NQGADLGLDSSTQEGFDYETNSLFDQQLDVYNKDLEYLGKCHSDLQDDSESYDLTQDDNS
SPCPGLDNEPQQGWVGQYDSYQGANSNELYQNNQQLSMMYRSQSELQSDSDSEDAPPKSWH
SRLSIDLSDKTFSFPKFGSTLQRAKSALEVVWNKSTQSLSGYEDSGSSLMGRFRTLSQST
ANESSTTLDSVYTEPYYYKAEDEEDYTEPVADNETDYVEVMEQVLAKLENRTSITETDE
QMAYDHLSEYETPYETPQDEGYDGPADDMVSEEGLEPLNETSAEMEIREDENQNIPEQPV
EITKPKRIRPSFKEAALRAYKKQMAELEEKILAGDSSSVDEKARIVSGNDLDASKFSALQ
VCGGAGGGGLYGIDSMPLRRKKTLPVVRDVAMTLAARKSGLSLAMVIRTSLNNEELKMHV
FKKTLQALIYPMSSTIPHNFVWTATTPTYCYECEGLLWGIARQGMKCLECGVKCHEKCQ
DLLNADCLQRAAEKSSKHGAEDKTQTIITAMKERMKIREKNRPEVFEVIQEMFQISKEDF
VQFTKAAKQSVLDGTSKWSAKITITVVSAAQ

PN7771

SEQ ID NO:3 >PN7771 (NT)

cttattttgaaaacattttacatagtgattagttaacccaacagaccaatcctgggaagac
agccagagcctgcagcaccttagtaacagaaaaactgataattaggagaagagacctgtc
caagaccaggaacctggacccaaaattgtgccatgttgctttactttaatgagtggcccca
gtaaaaactgagctgtatggcagagctgttcacatttatcttctgtgtccaccagttct
gctgaaacccctggcaagatcgtggccctgttgtagcttgatgtgttttgaacagctgtc
tatggaaagaaagcaaacacacacctagagcaacattgatttggttttagaaagctctttta
ttttcagttctggctgtgttcaacatcttagcttacgtttttcatgttgtaatgatctgc
cgtatggacgatcacctctaagttagagagttctgtaatttggttggttaagatgct
tggttagtgaaagctgctgcttttttatagtc aaaggactggttctgagagccttggtg
cagatggctgaggtcacctgccaaaggtgtatgtcgtgttggtatccatgcatcatg
gcaaggcatcttcagatgtgcaggtttcaggctttcatcggaatccagcacgttaaa
aatgaactttgccacatgttgagcttgaggaggtggccccagtgctgcagcagacatta
cttcaggacaacctcttgggcagggtacattttgaccaatttaaagaagcattatactc
atcttgtccagaactctgtcaaataagaacactttcaagaaccagactgctcactagaa
gctcagcccaaatatgttagaggtgggaagcgttacggacgaaggtccttgcccaggttc
caagagtccttgaggaggttctctgaagtgcggtgattgagccactggatgaagaagcg
cggccttcacacatcccagccggtgactgcagtgagcactggaagacgcaacgcagtgag
gagtatgaagcgggaaggccagtttaaggttttggaaccagatgacttgaatgcttcacag
agtggatcttcccctcccgaagactggatagaagagaaactgcaagaagtttgtgaagat
ttggggatcacccgtgatggtcacctgaaccggaagaagctggtctccatctgtgagcag
tatggtttacagaatgtggatggagagatgctcgaggaagtattccataatcttgatcct
gacggtacaatgagtgtagaagattttttctatggtttgtttaaaaatggaaaatctctt
acaccatcagcatctactccatatagacaactaaaaaggcacctttccatgcagtccttc
gatgagagtggacgacgtaccacaacctcatcagcaatgacaagtaccattggctttcgg
gtcttctcctgacctggatgatgggatgggccatgcatctgtggagagaatactggacacc
tggcaggaagagggcattgagaacagccaggagatcctgaaggccttggtttcagcctc
gatggaaacatcaatttgacagaattaacactggcccttgaaaatgaacttttggttacc
aagaacagcattcaccaggcggctctggccagctttaaggctgaaatccggcatttggtg
gaacgagttgatcaggtggtcagagaaaaagagaagctacggtcagatctggacaaggcc
gagaagctcaagtctttaatggcctcgaggtggatgatcaccatgcggccatagagcgg
cggaatgagtacaacctcaggaaactggatggagagtacaaggagcgaatagcagcctta
aaaaatgaactccgaaaagagagagagcagatcctgcagcaggcaggcaagcagcgttta
gaacttgaacaggaaattgaaaaggcaaaaacagagaactatatccgggaccgcctt
gccctctctttaaaggaaaacagtcgtctggaaaatgagcttctagaaaatgcagagaag
ttggcagaatatgagaatctgacaaacaaacttcagagaaatttggaatgtgttagca
gaaaagtttggtgacctcgatcctagcagtgctgagttcttctcctgcaagaagagagactg
acacagatgagaaatgaatatgagcggcagtgagggtactacaagaccaagtagatgaa
ctccagtctgagctggaagaatatcgtgcacaaggcagagtgtcaggcttccgttgaag
aactcacctgcagaagaagttgaggctaacagcgggtggcattgagccgaacacgggctc
ggttctgaagaatgcaatccattgaatatgagcattgaggcagagctggtcattgaacag
atgaaagaacaacatcacaggacatatgttgccctcagactggagctcgaagataaagtg
cgccattatgaaaagcagctggacgaaaccgtggtcagctgcaagaaggcacaggagAAC
atgaagcaaaggcatgagaacgaaacgcgcaccttagaaaaacaaataagtgccttaaa
aatgaaattgctgaacttcaggggcaagcagcagtgctcaaggaggcacatcatgaggcc

acttgcaggcatgaggaggagaaaaaacaactgcaagtgaagcttgaggaggaaaagact
cacctgcaggagaagctgaggctgcaacatgagatggagctcaaggctagactgacacag
gctcaagcaagctttgagcgggagaggggaaggccttcagagt agcgcctggacagaagag
aaggtgagaggcttgactcaggaactagagcagtttcaccaggagcagctgacaagcctg
gtggagaaacacactcttgagaaagaggagttaagaaaagagctcttggaagcacc
agggagcttcaggagggaaggggaaaaaatggaaacagagtgtaatagaagaacctctcaa
atagaagcccagtttcagttctgattgtcagaaagtcactgagaggtgtgaaagcgtctg
caaagcctggaggggctaccgccaagagctgaaggacctccaggaacagcagcgtgag
gagaaatcccagtggaatttgagaaggacgagctcacccaggagtgtgagggaagccag
gagctgctgaaagagactcttaagagagagaaaaaacttctctggtcctgaccaggag
agagagatgctggagaaaaacatacaaagaacatttgaaacagcatggtcgtcgagagacag
cagctactccaagacctggaagacctaaagaaatgtatctgaaacctcagcaaagcctgctg
tctgaccagatacttgagctgaagagcagtcacaaaagggaactgaggggagcgtgaggag
gtcctgtgccaggcaggggcttcggagcagctggccagccagcggctggaaagactagaa
atggaacatgaccaggaaaggcaggaaatgatgtccaagcttctagccatggagaacatt
cacaaagcgacctgtgagacagcagatcgagaaagagccgagatgagcacagaaatctcc
agacttcagagtaaaaataaaggaaatgcagcaggcaacatctcctctctcaatgcttcag
agtgggtgccagggtgataggagaggaggaggtggaaggagatggagccctgtccctgctt
cagcaaggggagcagctgttggagaaaaatggggacgtcctcttaagcctgcagagagct
catgaacaggcagtgaaaggaaaatgtgaaaatggctactgaaatttctagattgcaacag
aggctacaaaagttagagccagggttagtaatgtcttctgtttggatgagccagctact
gagttttttggaaatactgcggaacaaacagagcagtttttacagcaaaaccgaacgaag
caagtagaaggtgtgaccaggcggcatgtcctaagtgcacctggaagatgatgaggtccgg
gacctgggaagtacagggacgagctctgttcagagacaggaagtcaaaatagaggagtct
gaagcttcagtagagggtttttctgagcttgaaaacagtgaaagagaccaggactgaatcc
tgggagctgaagaatcagattagtgccttcaggaacagctaataatgtgtatgtgcggac
tgtgatcgagcttctgaaaagaaacaggacctactttttgatgtttctgtgctaaaaag
aaactgaagatgcttgagagaatccctgaggcttctcccaatatagctgtttgatgaa
gatgtgagccgagaaaaatgactgccttcaggaagagctgagaatgatggagacacgctac
gatgaggcactagaaaaataacaaagaactcactgcagaggttttcagggtgcaggatgag
ctgaagaaaatggaggaagtgcactgaaacattcctcagcctggaaaagagttacgatgag
gtcaaaatagaaaatgaggggctgaatgttctggttttgagacttcaaggcaagattgag
aagcttcaggaaagcgtggtccagcgggtgtgactgctgcttatgggaagccagtttagag
aacctggaaatcgaacctgatggaaatatactccagctcaatcagacactggaagagtgt
gtgcccagggttaggagtgtacatcatgtcatagaggaatgtaagcaagaaaaccagtac
cttgaggggaacacacagctcttggaaaaagtaaaagcacatgaaattgcctggttacat
ggaacaattcagacacatcaagaaaggccaagagtacagaatcaagttatactggaggaa
aacactactctcctaggctttcaagacaaacattttcagcatcaggccaccatagcagag
ttagaactggagaaaaacaaagttacaggagctgactaggaagttgaaggagagagtcact
attttagttaagcaaaaagatgtactttctcacggagaaaaggaggaagagctgaaggca
atgatgcatgacttgcagatcacgtgcagtgcagatgcagcaaaaagttgaacttctgaga
tatgaatctgaaaagcttcaacaggaaaattctattttgagaaatgaaattactacttta
aatgaagaagatagcatttttaacctgaaattagggaacattaaatggatctcaggaagaa
atgtggcaaaaaacggaaactgtaaaacaagaaaatgctgcagttcagaagatggttgaa
aatttaaagaacagatttcagaattaaaaatcaaaaaccaacaattggatttggaat
acagaacttagccaaaagaactctcaaaaccaggaaaaactgcaagaacttaataacgt
ctaacagaaatgctatgccagaaggaaaaagagccaggaaacagtgcatggagggaacgg

gaacaagagaagtttaatctgaaagaagaactggaacggttgtaaagtgcagtcctccact
ttagtgctcttctctggaggcggagctctctgaagttaaaatacagaccccatattgtgcaa
caggaaaaccaccttctcaaagatgaactggagaaaatgaaacagctgcacagatgtccc
gatctctctgacttccagcaaaaaatctctagtgttctaagctacaacgaaaaactgctg
aaagaaaaggaagctctgagtgaggaattaaatagctgtgtcgataagttggcaaaatca
agtcttttagagcatagaattgcgacgatgaagcaggaacagaaaatcctgggaacatcag
agtgcgagcttaaagtcacagctggtggcttctcaggaaaagggttcagaatttagaagac
accgtgcagaatgtaaacctgcaaagtgtcccgatgaaatctgacctacgagtgactcag
caggaaaaggaggctttaaacaagaagtgtgtctttacataagcaacttcagaatgct
ggtggcaagagctgggccccagagatagctactcatccatcagggctccataaccagcag
aaaaggctgtcctgggacaagttggatcatctgatgaatgaggaaacagcagctgctttgg
caagagaatgagaggctccagaccatggtacagaacaccaaagccgaactcacgcactcc
cgggagaaggtccgtcaattggaatccaatcttcttcccaagcaccaaaaaacatctaaac
ccatcaggtaccatgaatcccacagagcaagaaaaattgagcttaaagagagagtgtgat
cagtttcagaaagaacaatctcctgctaacaggaagggtcagtcagatgaattcccttgaa
caagaattagaacaattcattttggaaaatgaaggcctgaaaaagaacaagttaaactg
gatgagcagctcatggagatgcagcacctgagggtccactgcgacgcctagcccgtcccct
catgcttgggatttgcagctgctccagcagcaagcctgtccgatggtgccagggagcag
tttctgcagcttcaacgccagctgctgcaggcagaaaggataaaccagcacctgcaggag
gaacttgaaaacaggacctccgaaaccaacacaccacagggaaaccaggaacaactggta
actgtcatggaggaacgaatgatagaagttgaacagaaaactgaaactagtgaagggtt
cttcaagagaaagtgaatcagctcaaagaacaactctgcaagaacactaaggcagacgca
atggtgaaggacttgtatgttgaaaatgccagttgttgaaagctctggaagtgactgaa
cagcgacagaaaacagcagagaagaaaaattacctcctggaggagaagattgccagcctc
agtaatatagtttaggaatctgacaccagcgccattgacttctacacctcctttgagggtca
tagccaaaccaaagggtacactcatatttgtgcactttactgaaatagatgaacatttca
gtagggttctcaacttaaaattaagcctaacctaaaactgccagcaacacaactggagttt
ccatttatcataattagtttttctaaatagaccttatgggagtttgaaaataaatactc
acataatttactacttaaatatttcccaagatttgaatttattttaaaattttaatagcc
accaagaatgtggacatatgaaaattcaagaacctaaaaaataccagttttgaatgagtt
tttgtgggttttgggttttttaattattacaaatctatgtgtaaaatctagatatttgaagt
ttgagatctgatgagaatggttgttataaactttattttaaaaccaaatttaggtgttct
tacataatttaataactggaaagtcattataatagttttgggttctttgaattggtagacaa
ttagtagagtataattgggttaggaggcagggcttattaagtgggtattaaccgctgacat
cagacaaacccaaatctgtagaattctaacctcctaacacctgtgacagtattaccactc
ttcttgtattatagatttagaactgatttactcaattgcactcttaactaatgttaaaag
cttacttgccttaaacagccttttcttcttctcttaaaagtttcatttggggagctgggt
cttctaagaaacggataaagccacataattaaagcagttgaactagagggaaagcactga
acaaaccactttggagtaaatagctactcttagaaaagagggataagcagaccatgtagg
ttttctgtctctcaaactcttagagttcataaatttacttgagggtgcctcaagaactcag
ggaacaatactgtaaactgtcttccctgaactactgtagggcctctctaagaatttgaaat
gtataaaccatgtgacctcatttatttgtcttatataatttacagccataactagaattttt
atttctacgttttttagtaaatttaatatctgggggaaaaaaggccttgattttagggtt
aaaaacctgacttatagaagagtttatttaatataggtcaaaattttctgtgtttcttat
tccttctataacctcaaactctgattctaagaatttcttactgtgataatcattggcatgcc
acctgagggtcaaggagtgccaaataggactttccactcatgctcaagatcaaaactttat
agaacagtcaacatttttagattcggtaacctttttttcttccaattataatctctgctt

ctagccacttccgccagcagttggtggaagacttactaggtgcagggcactttccaagtt
catcacaacaacctgcttgttttcatgagacaataatccgaaaagttcgctttgatatat
tcctggagggccaagcccatctatttacaaaaggtgaacagcaaaatcaagcactgcttt
atgggcaggaacacaagagaaagcaaactgcccaagaagtcacatgtcagaaactcaat
ctcaacaaaataatttccatcaggggaacttcaggggtttcttgggggcttatgagtctcac
cgggtcaacccaggaggcctcactacaagagccttgacaaggcactgttttttgtgggact
gggagttcacactgatgaagcaaactttgaatttttgcacagctcttgtcagaaagccc
tgagttccccctggataaagagtttaatttttaatccttcctataattatacttcaaaata
tttgacatctgctattatgccttctttagatctttcttctgcggtgcagacatttctagt
aagtgtttgactacttgtatggcattagctttcacagaaaattgtttcacttaaaactgt
ggattggcctaggctaaggacaaaaataaactaagtacctgtagtgtatttatgtgat
gtgtcaagttactcaaagttattgctgttggaactgaacaataatatttcccagatagct
ggccttagcatgtgatcacgggtgttgtatttttaatttttgtcttttacagtatgagag
gtgtaggttaatttgtttatttctataaaatttgtatttatgtgtatataaaatgtacaa
tgaatgtaaataatgactttctggaaagtttagactacatttagaatctctattcaaaatc
aaaatgctgctcaaataaatttaaccaacatctaggtgcttaatttctcatttttatccca
cttatgagattgggaaaaagatcaatatgagaaataccatacagataccttaaatgtatg
catttgtgcaacaatttttgagaagggtgagtggcaatttataatttagttggcaatttat
aatagaacttatagctttttaaagactttttaaagacattaaatgtaaacttaaaaatgt
ttagatcttgtttcaaactttacaatagcattcttcaaaatattaagttatatattttat
aggcatttagttgcttatttaaagcactgattttcaaactttttgatttaagaacaatta
tttaagatcgtctcagaagatgggatcttcgtttcaagaaaagggaatcaagtttgcctt
tgagataatacgttacactaagaaaaggaaaatgtggatagtaaaaccacctctctcat
cctattgtactctctctgcttttttagaagcctgcacttaagcttagatttgtgaaggga
gagtagaaggggagaagtagaaccacagtggttttattttatttttctaaaactcttactaa
atccagatttttttaaactgttttaaatgtgaattcttcccagaaatttcaatgcattgca
tatttagccttcggcatatttttcatgaatagatcatgaagtcataaggcttccaaggcat
aggaagagatcttgcaggcttagtatttttaataatgcactattaccagggcagatatta
tgagaaactgtttcttctctaagggttttatggcagactttgcttttttaacatgtgagaa
atgaattttttattttgtgatattatgtgatttcttttgcctgagtgaaggaaaggagaaat
tggtgctattgtcagcatcttaaagggtatttccagtcagggaaggctaagtgtttgtg
atagtattaagcaagtcagttttgaatggattacctgtagtgactcattggaatgat
aattatacaagtaatgccaaaaaccaagtcaaagcctaattaaccaaagcactcatttaa
aaatcatcatgtttggacctatctggacctctcagcactgtaaaatagttttggttttgt
ggcatatgaatagctgtttaacaaatcaaagtttagctttttgcttctcagcttttttggg
caatacaagttaagttcttaatggggagacattatcatggcatgacttaagggaacattg
gtttgtgaaggaaaaacagattatctaaagccatctctatgtttctgttcagataaagat
taatgagttctgtgtttatatcagctttgtatatttcatcttagccattctatcctagaa
agatttttaatgtgagcttaagatgtaataaataattttgcaaacatgaaaaaaaaaaaa
aaaaa

SEQ ID NO:4 >PN7771 (AA)

MAEVTVP RVYVVF GIHCIMAKASSDVQVSGFHRKI QHVKNELCHMLSLEEVAPVLQQTLL
QDNL LGRVHFDQFKEALILILSRTL SNEEHFQEPDCSLEAQPKYVRGGKRYGRRSLPEFQ
ESVEEFPEVTVIEPLDEEARPSHIPAGDCSEHWKTQRSE EYEAEGQLRFWNPDDLNASQS
GSSPPQDWIEEKLQEVCEDLGITRDGHLNRKKLVSI CEQYGLQNVDGEMLEEVFHNLDPD

GTMSVEDFFYGLFKNGKSLTPSASTPYRQLKRHLSMQSFDESGRRTTTSSAMTSTIGFRV
FSCDDGMGHASVERILDWQEEGIENSQEILKALDFSLDGNINLTTELTLALENELLVTK
NSIHQAALASFKAERHLLERVDQVVREKEKLRSDDLKAEKLKSLMASEVDDHAAIERR
NEYNLRKLDGEYKERIAALKNELRKEREQILQQAGKQRLELEQEIEKAKTEENYIRDRLA
LSLKENSRLLENELLENAEKLAEYENLTNKLQRNLENVLAEKFGDLDPSAEFFLQEERLT
QMRNEYERQCRVLQDQVDELQSELEEYRAQGRVLRPLKNSPSEEEVEANS GGIEPEHGLG
SEECNPLNMSIEAELVIEQMKEQHHRDICCLRLELEDKVRHYEKQLDET VVSCKKAQENM
KQRHENETR TLEKQISDLKNEIAELQGQAAVLKEAHHEATCRHEEEKQLQVKLEEEKTH
LQEKLRLOHEMELKARLTQAQASFEREREGLOSSAWTEEKVRGLTQELEQFHQEQLTSLV
EKHTLEKEELRKELLEKHQRELQEGREKMETECNRRTSQIEAQFQSDCQKVTERCESALQ
SLEGRYRQELKDLQEQQREEKSQWEFEKDEL TQECAE AQELLKETL KREKTTSLVLTQER
EMLEKTYKEHLNSMVVERQQLLDLEDLRNVSETQQSLLSDQILELKSSHKREL RERE EV
LCQAGASEQLASQRLE RLEMEHDQERQEMMSKLLAMENIHKATCETADRERAEMSTEISR
LQSKI KEMQQATSPLSMLQSGCQVIGEEVEGDGALSLLQQGEQLLEENG DVLLSLQRAH
EQAVKENVKMATEISR LQQRLQKLEPGLVMSSCLDEPATEFFGNTAEQTEQFLQQNRTKQ
VEGVTRRHVLS DLEDDEV RD LGSTGTSSVQRQEVKIEESEASVEGFSELENSEETR TESW
ELKNQISQLQEQLMMLCADCDRASEKKQDLLFDVSVLKKKLKMLERIPEASPKYKLLYED
VSRENDCLQEELRM METRYDEALENNKELTAEVFR LQDELKKMEEVTTETFLSLEKSYDEV
KIENEGNLNVLVLR LQGKIEKLQESVVRCDCLWEASLENLEIEPDGNILQLNQ TLEECV
PRVRSVHHVIEECKQENQYLEGNTQLLEKVK AHEIAWLHGTIQTHQERPRVQNQVILEEN
TTLLGFQDKHFQHQATIAELELEKTKLQELTRKLKERV TILVKQKDVLSHGEEK EELKAM
MHD LQITCSEMQQKV ELLRYESEKLQQENSILRNEITTLNEEDSISNLKLGTLNGSQEEM
WQKTETVKQENAAVQKMVENLKKQISELKIKNQQLDLENTELSQKNSQNQEKLQELNQRL
TEMLCQKEKEPGNSALEEREQEKFNLKEELERCKVQSSTLVSSLEAELSEVKIQTHIVQQ
ENHLLKDELEKMKQLHRCPDLSDFQQKISSVLSYNEKLLKEKEALSEELNSCVDKLAKSS
LLEHRIATMKQE QKSWEHQ SASLKSQLVASQEKVQNLED TVQNVNLQMSRMKSDLRVTQQ
EKEALKQEVMSLHKQLQ NAGGKSWAPEIATHPSGLHNQQKRLSWDKLDHLMNEEQQLLWQ
ENERLQTMVQNTKAELTHSREKVRQLESNLLPKHQKHLNPSGTMNPTEQEKL SLKRECDQ
FQKEQSPANRKVSQMNSLEQELETIHLENEGLKKKQVKLDEQLMEMQH LRSTATPSPSPH
AWDLQLLQQQACPMVPREQFLQLQRQLLQAERINQHLQE ELENRTSETNTPQGNQEQLVT
VMEERMIEVEQKLKLVKRL LQEKVNQLKEQLCKNTKADAMVKDLYVENAQLLKALEVTEQ
RQKTA EKKNYLLEEKIASLSNIVRNLT PAPTSTPPLRS

PN9109

SEQ ID NO:5 >PN9109 (NT)

tggcttgtgaaaaagaacttatggtcagtggttcttgggcccttgtcaattgacccaaat
atgctaaacacacaaaggcagcaggtgcagattttgcctgcaagaattcgccactcgga
cctcaatatgaacagctgacagcagctgggtcagggcattctgagcaggcctggagaagac
ccttctttacgtgggatttgtgaaagagcaactggcagctgtgacccaaaaatgggatagc
ctaacagggcaattgagtgcagatgtgactggattgaccaagccattgttaaaagcaca
cagtatcaaagcctgctgagaagcctttctgataaactgagtgacttggataataaactc
agcagcagctctggctgtgagcacgcaccctgatgctatgaaccaacagttggaaacagcc
caaaaaatgaagcaggagatacagcaggaaaagaagcagataaaagtggcccaggcactc
tgtgaggatttgtcagcactgggttaaagaagagtacttgaaagcagaacttagtaggcaa
ctagaaggcatcttaaaatcatttaaggatgttgaaacagaaagcagagaatcatgtccag
caccttcagtcggcctgtgcaagctctcatcaatttcagcaaagtcttagagattttcag
gcttggctggatacaaagaaagaagagcaaaacaaatctcatccaatatctgccaaactc
gatgtcttggagtcatttaattaaagatcataaagacttttagtaaaactttgaccgctcag
tctcatatgtatgaaaaaacattgcagaaggtgaaaatctgttattaaaaacacaaggg
tctgagaaggcagccttacagttacagcttaatacaattaaaaccaattgggatacattt
aataagcaggtgaaagaaagagaaaaacaagttaaagagtcattggaaaaagcccttaag
tataaagagcaagtagagactctctggccatggatagacaaatgccaaaacaacctggag
gaaataaaattttgcttggatcctgctgaaggagagaattctattgccaaagttaaagtct
ctgcagaaggaaatggaccaacactttgggtatggtagaattactgaacaacacagccaat
agcttgcctcagtgctctgtgagatagataaagaagttgttacagatgagaataagtcactg
atccagaaggtggacatggctcactgaacaacttcacagtaagaaattctgtctggagaac
atgactcagaagtttaaagaatttcaagaagtttccaaagaatctaaaaggcagcttcag
tgtgcaaaggagcagctagatatccatgattcgctgggatcccaggcttacagtaacaaa
tacctgaccatgttgcaaaactcagcagaaatcacttcaggccttgaagcatcaggtagat
ttggctaaaagacttgccacaggaccttgtggtagaggcctcagactcaaagggaaacctct
gatgtttttattacaagtggaaaccatagctcaagagcatagtacactaagtgcagcaggtt
gatgaaaagtgttctttcttagaaaccaagcttcagggcatttgggcatttccagaatacc
attcgagaaatgttttctcagttcgcagagtttgatgatgaactggatagcatggctcca
gtggggagagatgcagaaacattgcaaaagcaaaaggaaactataaaagcctttctaaag
aaactagaagccctcatggcaagcaatgacaatgccaaataaaacctgcaagatgatgtta
gccacagaagaaacctctcctgaccttgttggaaatcaaaagggacttggaggccttaagc
aaacaatgcaacaagttactggaccgagcccaagccagagaagagcaggttgaagggaca
attaagcgccttgaagaattttacagcaaattgaaagaattttctattctgctccagaaa
gccgaagaacatgaagagtcacaaggtcctgttggatggaaacggagacaattaatcag
cagcttaacatgttcaaggtattccagaaagaagagattgaacccttgcaaggtaaacag
caagatgtaaactgggttaggtcaaggccttattcagagtgctgccaaaagcactagcact
cagggcttggagcatgacctggatgatgtcaatgcacggtggaagactctcaataagaag
gtggctcagcgagcagcccagctgcaggaggccttgcctgcactgtgggaggttccaggat
gccctggagtccttgcctcagctggatgggtggacactgaggagcttgtggccaatcagaag
ccccgctcggctgagttcaaagtggtaaaggcccagatacaagaacaaaagcttctccag
agattgttggatgaccgaaaatctacggtggaggtaatcaaacgagaaggagaaaaaatt
gctacaacagcagagcccgcagataaagtgaagattttgaaacagctcagtccttggat
agcagatgggaggcatttgccttaataaagctgaaacaaggaatcgtcagttggaagggtatc
tcggtggtagcacagcaatttcatgaaaccttagaaccactgaacgagtggttacaacc

atagaaaagaggctggtgaattgtgaacccataggaaccaagcatctaaacttgaggaa
caaattgcacagcacaaagtcttgcaagaggacatcttactcaggaaacaaaatgtagat
caggctttactaaatggtttagaactacttaacaaaccacaggtgatgaagttttaata
attcaagataaattggaagccattaaagcaaggtacaaagacattactaaactgagcact
gatgtggccaagactctggaacaggcgctgcagcttgcaaggcggtgcactccacacac
gaagagctgtgtacctggctggacaaagtggaggtggaattactttcatatgaaactcag
gttctgaaaggagaagaagcaagtcaagcacaaatgagaccaaaggaactgaaaaaggaa
gctaagaacaacaaagccttactggactcccttaatgaagtgagcagtgttttgctggaa
ctggtaccatggagggcaagagaaggacttgagaaaatggtagctgaggacaatgagcgc
taccgattagtgtgagcgacaccatcactcagaagggtggaggagatcgatgcagccattctg
cgatcacagcagtttgaccaagcagctgatgctgagttatcctggattactgaaacagaa
aaaaaattgatgtctctgggtgacatcaggcttgagcaagaccagacttctgctcagctt
caagttcaaaaagacattcaccatggagatttttgagacacaaggatattattgatgacctt
gttaaatctgggcataaaatcatgaccgcatgcagtgaagaggaaaagcaatcaatgaag
aaaaaactggacaaggtactgaagaactatgataccatctgccagattaattcagaaagg
tatctgcagctggaacgggcacagtccttggttaaccaattctgggaaacatatgaagaa
ctttggccatggctgacagaaacacaatcaatcatctctcagcttcccgccccagccctt
gaatatgaaactctaaggcagcagcaggaagaacatcggcaactgcgtgagttgatagct
gaacacaagcctcatatagataagatgaacaaaactgggccacagttactggaattgagc
cctggggaaggcttttctatccaagagaagtatgtggcagccgacaccctttacagtcaa
attaagaagatgtcaaaaagcgtgctgtggcactggatgaagccatttctcaatcaact
cagttccatgacaagatagatcagatccttgagagcctggaacgcacgtggaacgctctg
aggcagccaccctctatctctgcagaggttgagaagatcaaggaacagatcagtgaatat
aagaatgtgtcagtagacatggaaaagctacagccgttgatgaaactcttaaacagagg
ggagaggaaatgattgctagatctggggggactgataaagacatatctgccaaagctgtt
caggataagcttgaccaaattggttttcatttgggagaacatacacacactgggtggaagag
agggaagccaaactactggatgtgatggagctagcagaaaagttctgggtgtgatcacatg
tcattgatagttaccattaaagataactcaagatttcatccgggacctggaagatcctgga
attgatccttcagtagtaaaacaacagcaagaagcagcagagaccataagggaagaaata
gatggactacaggaggagctggatatagttattaacctagggttctgaactcattgcggca
tgtggggagcctgataaaccattgtcaagaagagtatagatgagttaaattcagcatgg
gattctctaataaaagcttggaagaccggattgacaaacttgaggaggcaatgcaggct
gccgttcagtaccaggatggactgcaggcggtatttgactgggtagatattgcagggtgtt
aaattagcttcaatgtctccaattggaacagatctcgaaactgtcaagcagcagattgaa
gagctaagcaatttaagtctgaggcctatcaacagcagatagaaatggaagactgaat
catcaagcagagcttttgctaagaaagtaacagaagagagtgacaaacacactgttcaa
gaccattaatggaactgaaattgatatgggatagcctggaggagagaatcatcaacaga
cagcataaactggaggggtgctctattagccttgggtcagttccaacatgccttgatgag
ctcctggcatggctgacacacaccgagggttgctaagtgtgagcagaaacctgttgaggga
gaccctaaagccattgaaattgaacttgccaagcatcatgtgctccaaaatgatgtatta
gcccatcagtcacagtggaagccgttaataaagcaggaaatgatctaattgaatcaagt
gcaggagaagaagcaagcaaccttcagaacaagctagaggttttaaatcaacgctggcaa
aatgttttgaaaaaacagaaacaaaggaagcagcagctggatggtgccttgccgagggcc
aaagggttccatggcgaaattgaggatttgagcagtggtgactgacacggagcgtcat
ctgttggcatctaaccgctgggaggtttaccggaaacagccaaggagcagcttaatgtc
catatggaagtctgtgctgcctttgaagctaaagaagaaacatatagagctctgatgcag
aaaggccagcagatgcttgcaagatgccccaaatctgcagagacaaatattgaccaagac

ataaataacttgaaagaaaaatgggaatcgggtggaaccaaactcaatgaaaggaaaact
aaactggaagaggctctcaacttggcaatggagttccacaattctctccaagacttcatc
aactggcttactcaggctgaacagaccctaaatgtagcttctcggccaagtctcatcttg
gacacagtcttatttcaaattgacgaacacaagggttttgccaatgaagtaaattctcat
cgtgagcagataatagagctggacaaaactggaacccacctaataatattttagtcagaaa
caagatggttggttctaatacaagaatctacttatcagtgtaaaaagtcgatgggaaaaagtg
gttcaacgggtggtagagagaggaagatctttggatgatgcaaggaagagagccaagcag
ttccatgaagcttggagtaaacttatggagtggttagaagagtcagaaaagtctttggat
tctgaactggaaatcgcaaatgatccagacaaaataaaaaacacaacttgcacaacataag
gagtttcagaaatcactcggagccaagcattctgtctacgacaccaccaacaggactgga
cgttctctgaaggagaaaaacctccctggctgatgacaacctgaaactggatgacatgctg
agtgaactcagagacaaatgggataccatatgtggaaaatctgtggaaagacaaaacaaa
ttggaggaagccctgttattttctggacaattcacagatgccctacaggctctcattgat
tgggtatatagagttgaaccccagctggcagaagaccagcctgttcatggagacattgat
ttgggtgatgaatctgatcgataatcacaaggccttccaaaaagagttggggaagaggacc
agcagtgctgcaggccctgaagcgtcagcccgagaactcatagaaggcagtcgggatgac
tcctcctgggtcaaggtccagatgcaggaattaagcacacgctgggagaccgtgtgtgca
ctttctatatcaaagcaaacacgggttagaagcagccctgcgtcaggcagaggaattccac
tcgggtggtacatgccctcttggagtggttggtgaggcggagcaaacctgcgtttccat
ggtgtcctcccagatgatgaggatgctctccggactctcattgatcagcataaagaattc
atgaagaaactggaagaaaagagagctgaactaaataaagccaccactatgggcgacacc
gttttggctatctgccacccccgactccatcactaccattaagcactggataacaatcatc
cgggagaggtttgaggaggtgctggcctgggcaaagcaacatcagcagagattagcaagt
gctctggctgggcttattgccaacaggaattggttggaaagctttgctggcttgggtgcaa
tgggctgaaactacacttactgataaggataaagaagtcacccccaggagatcgaagag
gtgaaagcactcattgcagaacaccagaccttcatggaggaaatgaccagaaaacagcct
gatgttgataaagtaacgaagacctataagaggagagctgctgatccttctcattacaa
tcccatattccagtcttggataagggacgagcaggaagaaaacgctttccagcatcaagc
ttgtatccctctgggtcacagacacaaattgaaacaaaaatcctagggtaaacttactg
gtgagcaaatggcagcaagtctggctcctggcgttggaaagaaggaggaaactcaatgat
gccttggacagactagaggagctgaggggaatttgctaactttgatatttgatatttggcgc
aaaaatacatgcgatggatgaatcacaagaaatctcgagtgatggacttcttcaggaga
attgataaagaccaggatgggaaaaataacgcggcaggaatttattgatggaattctttcc
tcaaagtttccaaccagtcgcttggagatgagcgcagttgcagacatctttgacagagat
ggcgatggatatattgactactatgaattttagtagcagcccttcacccaaataaagatgca
tataaacctatcacagatgccgacaaaatcgaagatgaggtgacaaggcaggtagctaag
tgtaaatgtgcaaagcgatttcaagttgagcagattgggtgataataaatacagggtcttc
ctgggaaatcagtttggagactcccagcaactgcgactgggtccggatcctgaggagact
gtgatgggttcgtgttggaggtggatggatggcacttgatgagttcttagtgaaaaatgat
ccttgcagggccaaaggaaggacaaacatggaactgcgtgagaagttcatttttagcagat
gggtgccagccagggtatggctgctttccgacccccaggccgaagatcccggccatcatca
cgaggcgcttcacccaacagatccacttctgtgtccagtcaggctgcgcaggcggcctcc
ccacagggtccctgccaccaccacacccaagattctccatcctttaacacgcaattatggg
aaaccatgggtgacaaacagcaaaatgtcaactccttgtaaagcagcagagtgtcagac
tttcccgtgccatctgcagaggggaacgccaatacaaggaagcaagcttcgacttccagga
tatttatcagggaagggttccactctggggaggacagtggttgataacaactgcagct
gccagagtccgaacacagtttgctgattccaagaagactcccagccgaccaggaagtcga

gctggaagcaaagctggcagcagggccagcagccgaggcagtgatgcatcagacttt
gacatttcagaaatccagtcggtgtgctcagatgtggaaactgtccccagacacacaga
cctacaccccgagcaggttctcgccatccacagcgaagccttcaaaaatccccacgccc
cagaggaaatcacctgccagcaaattggacaagtcctcaaagagatagtgaattggttc
taccaaggcccttccttgagcatttattatttaagtttgacgatgtaaaatatggtgta
gaaattcttgtaaatattgcaagaggcgagtttaaaattctgcagatggccttatttgt
gtatttgtctttttattttatctgtataatttttttgtcagatattctggggttaaagt
cacatcatatgtgaggaggaaaagtttaacatgaactaacatttctgcactgtaacgtgc
cgggcacacactaaactcagttactgtacctacaggtaagtctacatcctctctgacagc
cacagcactacatcaatccctgacgttagggatacctcatgacattttcctgtttttatg
gaaactctgagaagctgaatgatacatgcaggggatatttttgagatgatttaaagtga
aaccaaaagatggaagacaaaaagacaaacacacccacacgcagtccttgcagtatctga
cagagaactcacaggaagttacttcaagcacttgccagttactatgatattcaagtacctt
gcagcatttctctgccattgctttcaatgaggccagaggcatcctggatattagacctat
tatactgtaagaatataagtataaagtgcgttcatatacatgtgaggttttcttttgctt
gagtgagacagtagcacctgtatcattgaactcattttgtatcagagcaattttgcttgca
gaaagctatgaaataaaacacgtcccttaactgc

SEQ ID NO:6 >PN9109 (AA)

WLVEKELMVSVLGPLSIDPNMLNTQRQQVQILLQEFATRKPQYEQLTAAQGILSRPGED
PSLRGIVKEQLAAVTQKWDSTGQLSDRCDWIDQAIVKSTQYQSLLRSLDKLSLDLNDKL
SSSLAVSTHPDAMNQOLETAQKMKQEIQQEKKQIKVAQALCEDLSALVKEEYLKAELSRQ
LEGILKSFKDVEQKAENHVQHLQSACASSHQFQQMSRDFQAWLDTKKEEQNKSHPI SAKL
DVLES LIKDHKDFS KTLTAQSHMYEKTIAEGENLLLKTQGSEKAALQLQLNTIKTNWDTF
NKQVKERENKLKESLEKALKYKEQVETLWPWIDKCQNNLEEIKFCLDPAEGENSIAKLKS
LQKEMDQHFGMVELLNNTANSLLSVCEIDKEVVTDENKS LIQKVD MVTEQLH SKKFCLEN
MTQKFKEFQEVSKESKRQLQCAKEQLDIHDSLGSQAYS NKYL TMLQTQOKSLQALKHQVD
LAKRLAQDLVVEASDSKGTSDVLLQVETIAQEHSTLSQQVDEKCSFLET KLQ GIGHFQNT
IREMFSQFAEFDDDELDSMAPVGRDAETLQKQKETIKAF LKKLEALMASNDNANKTCKMML
ATEETSPDLVG IKRDL EALS KQCNKLLDRAQAREEQVEGTIKRLEEFYSKLKEFS ILLQK
AEEHEESQGPVGMETETINQQLNMFKV FQKEEIEPLQ GKQQDVNWL GGLIQSAKSTST
QGLEHDLDDVNARWKT LNKKVAQRAAQLQEALLHCGRFQDALESLLSWMVDTEELVANQK
PPSAEFKV VKAQIQEQKLLQRL LDDRKSTVEVIKREGEKIATTAEPADKV KILKQLSLLD
SRWEALLNKAETRNRQLEGISVVAQQFHETLEPLNEWLTTIEKRLVNCEPIGTQASKLEE
QIAQHKVLQEDILLRKQNV DQALLNGLELLKQTTGDEVLI IQDKLEAIKARYKDITKLST
DVAKTLEQALQLARRLHSTHEELCTWLDKVEVELLSYETQVLKGEEASQAQMRPKELKKE
AKNNKALLDSLNEVSSALLELVWRAREGLEKMVAEDNERYRLVSDTITQKVEEIDAAIL
RSQQFDQAADAELSWITETEKKLMSLGDIRLEQDQTS AQLQVQKTFTMEILRHKDIIDDL
VKSGHKIMTACSEEEKQSMKKKLDKVLKNYDTICQINSERYLQLERAQSLVNQFWETYEE
LWPWLTTETQSIIISQLPAPALEYETLRQQQEEHRQLRELIAEHKPHIDKMNKTGPQLLELS
PGEFGFSIQEKYVAADTLYSQIKEDVKKRAVALDEAISQSTQFHDKIDQILES LERIVERL
RQPPSISAEVEKIKEQISENKNVSVDMEKLQPLYETLKQRGEEMIARSGGTDKDISAKAV
QDKLDQMVF IWENIHTLVEEREAKLLDVMELAEKFWCDHMSLIVTIKDTQDFIRDLEDPG
IDPSVVKQQQEAAETIREEIDGLQEELDIVINLGSELIAACGEPDKPIVKKSIDELNSAW
DSL NKAWKDRIDKLEEAMQAAVQYQDGLQAVFDWVDIAGGKLASMSPIGTDLET VKQQIE
ELKQFKSEAYQQQIEMERLNHQAELLKKVTEESDKHTVQDPLMELKLIWDSLEERI INR

QHKLEGAL LALGQFQH ALDELLAWLTHTEGLLSEQKPVGGDPKAI E I ELAKHHVLQNDVL
AHQSTVEAVNKAGNDLIESSAGEEASN LQNKLEVLNQRWQNVLEKTEQRKQQLDGALRQA
KGFHGEI EDLQQWLT DTERHLLASKPLGGLPETAKEQLNVHMEVCAAFEAKEETYKSLMQ
KGQQMLARCPKSAETNIDQDINN LKEKWESVETKLNERKTKLEEALNLAMEFHNSLQDFI
NWL TQAEQTLNVASRPSLI LDTVLFQIDEHKVFANEVNSHREQI IELDKTGTHLKYFSQK
QDVVLIKNLLISVQSRWEKV VQRLVERGRSLDDARKRAKQFHEAWSKLMEWLEESEKSLD
SELEIANDPDKI KTQLAQHKEFQKSLGAKHSVYDTTNR TGRSLKEKTS LADDNLKLDDML
SELRDKWDTICGKSVERQNKLEEALLFSGQFTDALQALIDWLYRVEPQLAEDQPVHGDID
LVMNLIDNHKAFQKELGKRTSSVQALKRSARELIEGSRDDSSWVKVQMQLSTRWETVCA
LSISKQTRLEAALRQAEEFHSVVHALLEWLAEAEQTLRFHGVLPDDDEDALRTLIDQHKEF
MKKLEEKRAELNKATTMGDTVLAICH PDSITTIKHWIT IIRARFEEVLAWAKQHQQRLAS
ALAGLIAKQELLEALLAWLQWAETTLTDKDKEVIPQEIEEVKALIAEHQTFMEEMTRKQP
DVDKVTKTYKRRAADPSSLQSHI PVLDKGRAGRKRFPASSLYPSGSQTQIETKNPRVNLL
VSKWQQVWLLALERRRKLNDALDRLEELREFANFDFDIWRKKYMRWMNHKKSRVMDFFRR
IDKDQDGKITRQEFIDGILSSKFPTSRLEMSAVADIFDRDGDGYIDYYEFVAALHPNKDA
YKPITDADKIEDEVTRQVAKCKCAKRFQVEQIGDNKYRFFLGNQFGDSQQRLRLVRI LRST
VMVRVGGGWMALDEFLVKNDPCRAKGRTNMELREKFILADGASQGMAAFRPRGRRSRPSS
RGASPNRSTSVSSQAAQAASPQVPATTT PKILHPLTRNYGKPWL TNSKMSTPCKAAECSD
FPVPSAEGTPIQGSKLRLPGYLSGKGFHSGEDSGLITTAARVRTQFADSKKTPSRPGSR
AGSKAGSRASSRRGSDASDFDISEIQSVCSDVETVPQTHRPTPRAGSRPSTAKPSKIPTP
QRKSPASKLDKSSKR

PN12218

SEQ ID NO:7 >PN12218 (NT)

atgccgcgtcactgctccgccgccggtgctgcacacgggacacgcgcgagacgcgcaac
cgccggcatctccttccacagacttcccaagaaggacaacccgaggcgaggcttgtggctg
gccaactgccagcggctggaccccagcggccagggcctgtgggacccggcatccgagtac
atctacttctgctccaaacactttgaggaggactgctttgagctggtgggaatcagtgga
tatcacaggctaaaggagggggcagtcaccacatatttgagtctttctccaagttgcgc
cggacaaccaagaccaaaaggacacagttaccacctggccccgctgaagtcagccggctc
agacgatgcaggaagcgtgctccgagggccgagggcccacaactccatthttctccacct
ccacctgctgatgtcacctgctttctgtggaagaggcctcagcacctgccactttgccg
gcctccccagctgggaggctggagcctggccttagcagcccccttttcagacctactgggc
cccttgggtgcccaggcagatgaagcaggctgcagcgcccagccttcaccagagcggcag
ccctccccctctcgaaccacggccagtcctccccctcagcgtatatgctgcgcctgccccca
cccgccggagcctacatccagaatgaacacagctaccaggtgggcagcgcttactctgg
aagcggcgagccgaggcagcccttgatgccttgacaaggcccagcgccagctgcaggcc
tgcaagcggcgggagcagcggctgcggttgagactgaccaagctgcagcaggagcgggca
cgggagaagcgggcacaggcagatgcccgccagactctgaaggagcatgtgcaggacttt
gccatgcagctgagcagcagcatggcctgaggggctgctggactgaccgaggggctgcc
agcaagactgcagcctcttctccctcagatcccaccagacccaccaggtgccataataa
agcggattctagacggaaaaaaaaaaaaaaaaaaaaa

SEQ ID NO:8 >PN12218 (AA)

MPRHCSAAGCCTRDTRNTRNRGISFHLRPPKDNPRRGLWLANCQRLDPSGQGLWDPASEY
IYFCSKHFEEDCFELVGISGYHRLKEGAVPTIFESFSKLRRRTTKKGHSYPPGPAEVSR
RRCRKRCSEGRGPTTFFSPPPPADVTCFPVEEASAPATLPASPAGRLEPGLSSPFS
DLG PLGAQADEAGCSAQPSPERQPSPLEPRVSPSAYMLRLPPPAGAYIQNEHSYQVGS
ALLWKRRAEALDALDKAQRQLQACKRREQRLRLRLTKLQQERAREKRAQADARQTLKEHVQDF
AMQLSSSMA

PN13734

SEQ ID NO:9 >PN13734 (NT)

gagagaattgggtttgaggggatttttgatagagcaaaagaggattgtttgtttttaatt
agtatagcagttgtaacctttttcctctctcagattttccccaagaacgctgtcccgtgg
tgctcgcaccacttttataccctgaaaaacgggacattctaatggacaggatcctgcctg
attccggaggggtagctaaaaccatgatggagagctctttggctgatttcatgcaagaag
taggctatggcttttgtgcaagtattgaagaatgtcgcaatataatcgtgcagtttggtg
ttcggggagggtcacagctgccagggttgcaagggttttggaatgatggctcgaactcatt
caggattaacagatggcattccattacagagtatttctgctccgggcagtgggatctgga
gtgatgggaaagataaaaagtgatggagcacaggcacacacatggaatgtagaagtcttga
ttgacgttcttaagaactgaatccaagtttgaatttcaaggaagtaacttatgaactgg
accatcctggatttcaaattcgtgacagtaaaggacttcataatgtgggttatggcattc
agaggggtttgggtatggaagtgttcccagtagacctcatatatagaccttggaacatg
ctgaaggccagctctccttcattcaacattcccttataaatccagagatcttctgttttg
ctgactatccctgtcatactgttgccactgatattctgaaagcaccaccagaggatgaca
atcgagaaattgccacatggaagagcttggatttgattgaatctctgctgaggcttgca
agggtgggcagtatgagcaagtcaaacagctcttcagcttccctatcaaacactgtccag
acatgctgggtattggccttactacaaattaacacctcttggcataccttgcgccatgaac
ttatctccactctgatgccaattttcccttggaaccatcctaactcagctattattttg
actatgcatggcatgggcaggacagctctccctcaattcgccaacttatcatgcatgcaa
tggcagaatggtacatgagaggggagcagtatgatcaggccaaattgtctcgaataacttg
atgtggcccaggacttgaaggccttgtcaatgctgctaaatggtactccatttgcttttg
ttattgaccttgctgcacttgcttcacgtcgtgaataacctcaaacttgataagtggctca
cagataaaattcgagagcatggggagccttttatccaggcgtgtatgacttttttaaga
gacggtgtccttctattttgggcggacttgccccagaaaaagaccagcccaaaagtgtc
aacttctccagaaactttggcgacaatgttggcctgtctgcaagcttgtgcaggaggatg
tttctcaggagctatcagaaactatcctcaccatggtagccaattgcagtaattgttatga
ataaggccagacaaccaccacctggagtattgccaaaaggacgtcctcctagtgttagca
gcttagatgccatttctcctgttcagattgacctcttggctggaatgacatctcttagta
taggtgggttcagctgccccctcacaccagagtatgcagggttttctccaaatttggtt
ctgcattcagtagccctcagtcaccagcaaaagcatttccacccctttcaacccccaatc
agaccactgcattcagtggtatttgaggactttcatcacagcttccagtaggtggctctg
gcacaggcagcctgactgggtataggaactgggtgctcttggaactccctgcagtgaataacg
acccttttgtagagaggaaactgggcacctctggactgaatcagcctacattccagcaga
gtaagatgaaaccttcggacttgtctcaggtgtggccagaggcaaaccagcactttagta
aagagatagatgatgaagcaaacagctatttccagcgaatatataatcatccaccacatc
caacctatgtctgttgatgaggtattagaaatgctgcagagatttaaagactctactataa
agagggaaacgagaagtatttaactgtatgctaaggaacttggttgagaatatcgttttt
ttccccagtatcctgataaagagttacatataacagcctgcctatttggtgggtataattg
agaaaggactgggtcacttacatggcactaggctctggctctacgatatgttcttgaagcct
tacgcaagccttttggtatccaaatgtattatttcgggattgctgcactagatagattta
aaaacagattgaaggactatccccagttattgtcagcatttggtctctatcagtcacttta
tgcaatttccacatcatttacaggagtatattgagtatggacagcagcttagagatcctc
ctgtgaaaatgcaaggctctatcacaaccttggaagtattgcactggctcaggcccagg
ctcaggcccagggttccagcaaaagctcctcttgctgggtcaagtttagcactatggtaacca
cctcaacaactaccactgttgctaaaacgggttacgggtcaccaggccaactggagtcagct

ttaagaaagatgtgccaccttctattaataactacaaatatagatacgttgcttggtggcca
cagatcaaactgagagaattgtggagccccagaaaatatccaggagaaaattgctttta
ttttcaataatctctcacagtcaaatatgacacaaaagggtgaagagctaaaggaaacgg
tgaaagaagaatttatgccttgggtttcacagtatctgggtatgaagagagtcagtattg
agccaaactttcatagcctgtattcaaacttccttgacacgctgaagaatcctgaattta
acaagatgggttctgaatgagacctacagaaacattaaagtgtcctgacctctgataaag
ctgcagccaatttctcagatcggttctttgctgaagaacttgggacattgggttaggaatga
tcacattagctaaaaacaaacccatcttacacactgacttggatgtgaaatcattgctgc
tagaggcttatgttaaaggacaacaagaattgctctatgtagtgccctttgttgccaaag
tcttagaatctagcattcgtagtggttttagggccaccaaacccttggacaatggcaa
ttatgaatgtattagctgagctacatcaggagcatgacttaaagttaaacttgaagtttg
aaatcgagggttctctgcaagaaccttgcattagacatcaatgagctaaaacctggaaacc
tcctaaaggataaagatcgctgaagaatttagatgagcaactctctgctccaaagaaag
atgtcaagcagccagaagaactccctcccatcacaaccacaacaacttctactacaccag
ctaccaacaccacttgtacagccacgggtccaccacagccacagtacagctaccacgaca
tcaatgtctattcccttgcgggcttggcaccacacattactctaaatccaacaattccct
tgtttcaggcccatccacagttgaagcagtggtgctcaggcaattgaacgggctgtcc
aggagctggtccatcctgtggtggatcgatcaattaagattgccatgactacttgtgagc
aaatagttaggaaggattttgcccctggattcggaggaatctcgaatgcgaatagcagctc
atcacatgatgcgtaacttgacagctggaatggctatgattacatgcagggaaacctttgc
tcatgagcatatctaccaacttaaaaaacagttttgcctcagcccttcgtactgcttccc
cacaacaaagagaaatgatggatcaggcagctgctcaattagctcaggacaattgtgagt
tggcttgctgttttattcagaagactgcagttagaaaaagcaggccctgagatggacaaga
gattagcaactgaatttgagctgagaaaacatgctaggcaagaaggacgcagatactgtg
atcctgttgttttaacatatcaagctgaacggatgccagagcaaatacaggctgaaagttg
gtggtgtggacccaaagcagttggctgtttacgaagagtttgacgcaatgttccctggct
tcttacctacaaatgacttaagtacgcccacgggatttttagcccagcccatgaagcaag
cttgggcaacagatgatgtagctcagatttatgataagtgtattacagaactggagcaac
atctacatgccatcccaccaactttggccatgaaccctcaagctcaggctcttcgaagtc
tcttggagggttgtagttttatctcgaaactctcgggatgccatagctgctcttggattgc
tccaaaaggctgtagagggttactagatgccacaagtgggtgctgatgctgaccttctgc
tgcgctacagggaatgccacctcttggctctaaaagctctgcaggatggccgggcatatg
ggctcccatgggtgcaacaaacagatcacaagggtgcctaattgaatgtcgagatgaatata
aatataatgtggaggctgtggagctgctaattcgcaatcatttgggttaatatgcagcagt
atgatcttcacctagcgcagtcattggagaatggcttaaactacatggctgtggcatttg
ctatgcagttagtaaaaatcctgctgggtggatgaaaggagtgttgctcatgttactgagg
cagatctgttccacaccattgaaaccctcatgaggattaatgctcattccagaggcaatg
ctccagaaggattgccccagctgatggaagttagtgcatccaactatgaagcaatgattg
atcgtgctcatggaggcccaaactttatgatgcattctgggatctctcaagcctcagagt
atgatgacctccaggcctgagggagaaggcagagtatcttctgaggggaatgggtgaatc
tctaccattcagcagcagctggccgcgacagtaccaaagctttctctgcatttgttggaac
agatgcaccagcaaggaatactgaagaccgatgatctcataacaagggttcttctgtctgt
gtactgaaatgtgtgttgaaatcagttaccgtgctcaggctgagcagcagcacaatcctg
ctgccaatcccaccatgatccgagccaagtgtatcacaacctggatgcctttgttcgac
tcattgcactgctcgtgaaacactcaggggaggccaccaacactgtcacaagattaatc
tgctgaacaaggctccttgggtatagtagtgggagttctccttcaggatcatgatgttcgtc
agagtgaatttcagcaacttcctaccatcgaatttttatcatgcttctcttggaaactca

atgcacctgagcatgtggttggaaccattaatttccagacacttacagctttctgcaata
cattccacatcttgaggcctaccaaagctcctggctttgtatatgcctggcttgaactga
tttcccatcggatatttattgcaagaatgctggcacatacgccacagcagaaggggtggc
ctatgtatgcacagctactgattgattttattcaaataatttagcgctttccttagaaatg
tggaactcaccaaacctatgcaaatcctctacaagggaactttaagagtgtgtggttc
ttttgcatgattttccagagttcctttgtgattaccattatgggttctgtgatgtgatcc
cacctaattgtatccagttaagaaatttgatcctgagtgcctttccaagaaacatgagggc
tccccgaccattcactcctaataaaagggtggacatgttgagtgaataaacattgctc
cccgatttctaccaatttactggagtaatgccacctcagttcaaaaaggatttggtatt
cctatcttaaaactcgatcaccagtcactttcctgtctgatctgcgagcaacctacagg
tatccaatgaacctgggaatcgctacaacctccagctcatcaatgcactgggtgctctatg
tcgggactcaggccattgcgccacatccacaacaagggcagcacaccttcaatgagcacca
tcactcactcagcacacatggatatcttccagaatttggtgtggacttggaactgagg
gtcgctatctctttttgaatgcaattgcaaatcagctccggtacccaaatagccacactc
actacttcagttgcaccatgctgtacctttttgagaggccaatacgggaagccatccaag
aacagatcacaaagattctcttggaacggttgattgtaaataggccacatccttggggctc
ttcttattaccttcattgagctgattaaaaaccagcgtttaagttctggaacctatgaat
ttgtacactgtgccccagaaatcgaaaagttattccagtcggtcgacagtgtgtcatgg
gacagaagcaggcccagcaagtaattggaagggaacaggtgccagttagacgaaactgcatc
tctgttgtagtgtcagcttagaggtctcactgcaccgagttcataaactgactgaagaa
tcctttcagctcttcttgactttcccagccctttgggtttgtgggtatctgccccaaactac
tgttgggatcagcctcctgtcttatgtgggcacgttccaaagtttaaatgcatttttttg
actcttggccaaaatttagaagatgctgtgaatatcattttgaaacttgtgtaatacatga
aagagaaaacctttgtctggaacttcttgggctttgtgcaagctgtgtccaaggcaagta
cataaactggtaccttgtaatgaagaggcagctgatgccatgcacttgtctgagggcata
gctccatgtctctgacattcctggtgtcccaaagaatagcaaaaagccagtttgaatat
tatgtaacttatttttttaattgtggacaggggaccttgaaaatcactaagttattaaaaa
tgtggatgtgctagaattggatatgtccaggaacatgggaagggtcactattggaatcc
catgagtttccattttgtctctacccaaacgtattccaaagctgactgcattttgtacat
cttattttcttttggggattatacacctcagccgcctgagatgggggtcagctctttatat
aaagggaaccagaccaggcctaagcccacccccctaccctcacccccacaatcctctcc
tgaaacttaaaaacagtgggaatataggaaagggaaccaaatactcattaattaattgttc
tccccattaccccactgaatgaatggccatacaggctaagctgaataatgacaaagttg
aaaggaccaatacagccccctttataaggattttgaatgttttgcaaatgtattggtccc
tgtgtgtattttgtagccttttctgggcttcagctcccctacttcttgtatgtgtatg
catactgtagctaaccattaaagtcatgacacacacatgagtcactgtgcctttctcag
tagcagcagccagtgctggtgggtgaggaggaaaagtggacaatccagccctgcagacctt
ggggccatggggaaccaccaactaacttcttgtctgaatgattgatttgattgattgattg
ataggtcattcctactactaagctggcatgtttaaggaaattgtatttttcttctctattt
atttcaacactggacaaatgctggagcaggtttatctggttaagctgagtttaaaatacc
cagtttttaatatccttttccccaggtatttttttttttttaaaagaaaatgagtagata
cgtatttataaaacttaaccacttaaaatttgccctacctttcatgactgtcaagtttta
tggccagagaggacaaaacagttcaaaattaaataattgaagtcctccttgagtgtatgtc
ttagggtttattccctgagaggtggtttgtgccatctagactgaactttgggtaactatc
gagtgccagttacacagcttattaaatccagagctttttcaataaagggttaagtgacttc
ctcaaactagacttagatttaaacagggttctacctccaaagtctattattaaatgctg
aaacacaacaagacttacttattactaccgtatgtccactggctttgggttaaaactgaga

acaaaacagctgtaacatgctttaagtaacaattagcagtgattcccaagtctgctgttc
tcaatcctaaaacacatcaccttacctgagttaatcctagcacaccaactttgctactt
ttcctcttggtgttttagtaagcaaaagaaagatccaaattttcctctttttcaaacaatca
atgagattagcttagaataaagttcttat

SEQ ID NO:10 >PN13734 (AA)

MDRILPDSGGVAKTMMESSLADFMQEVGYGFCASIEECRNII VQFGVREVTAAQVARVLG
MMARTHSGSLTDGIPLQSI SAPGSGIWSGDKDSDGAQAHTWNVEVLIDVLKELNPSLNFK
EVTYELDHPGFQIRDSKGLHNVVYGIQRGLGMEVFPVDLIYRPWKHAEGQLSFIQHSLIN
PEIFCFADYPCHTVATDILKAPPEDDNREIATWKSLLDIESLLRLAEVGQYEQVKQLFSF
PIKHCPDMLVLALLQINTSWHTLRHELISTLMPIFLGNHPNSAIILHYAWHGQGQSPSIR
QLIMHAMAWEYMRGEQYDQAKLSRI LDVAQDLKALSMLLNGTPFAFVIDLAALASRREYL
KLDKWLTDKIREHGEPFIQACMTFLKRRCP SILGGLAPEKDQPKSAQLPPETLATMLACL
QACAGSVSQELSETILTMVANCSNVMNKARQPPPGVMPKGRPPSASSLDAISP VQIDPLA
GMTSLSIGGSAAPHTQSMQGFPPNLGSAFSTPQSPAKAFPPLSTPNQTTAFSGIGGLSSQ
LPVGGGLGTGSLTGIGTGALGLPAVNNDPFVQRKLGTSGLNQPTFQQSKMKPSDLSQVWPE
ANQHFSKEIDDEANSYFQRIYNHPPHPTMSVDEVLEMLQRFKDSTIKREREVFNCLRLNL
FEEYRFFPQYPDKELHITACLFGGIIEKGLVTYMALGLALRYVLEALRKPF GSKMYYFGI
AALDRFKNRLKDYPQYCOHLASISHFMQFP HHLQEYIEYGQQSRDPPVKMQGSIITPGSI
ALAQAQAQAQVPAKAPLAGQVSTMVTTSTTTTVAKTVTVTRPTGVSFKKDVPPSINTTNI
DTLLVATDQTERIVEPPENIQEKIAFIFNNLSQSNMTQKVEELKETVKEEFMPWVSQYLV
MKRVSIEPNFHSLSYNFLDTLKNPEFNKMVLNETYRNIKVLLTSDKAAANFSDRSLLKNL
GHWLGMITLAKNKPILHTDLDVKSLLLEAYVKGQQELLYVVPFVAKVLESSIRSVVFRPP
NPWTMAIMNVLAELHQEHD LKLNLFKEIEVLCKNLALDINELKPGNLLKDKDRLKNLDEQ
LSAPKKDVKQPEELPPIITTTTTSTTPATNTTCTATVPPQPQYSYHDINVYSLAGLAPHIT
LNPTIPLFQAHPQLKQCVRQAIERAVQELVHPVVDRS IKIAMTTCEQIVRKDFALDSEES
RMRIAAHHMMRNLTAGMAMITCREPLLMSISTNLKNSFASALRTAS PQQREMMDQAAAQL
AQDNCELACCFIQKTAVEKAGPEMDKRLATEFELRKHARQEGRRYCDPVVLT YQAERMP
QIRLKVGVDPKQLAVYEEFARNVPGFLPTNDLSQPTGFLAQPMQAWATDDVAQIYDKC
ITELEQHLHAIPPTLAMNPQAQALRSLLLEVVL SRNSRDAIAALGLLQKAVEGLLDATSG
ADADLLLRYRECHLLVLKALQDGRAYGSPWCNKQITRCLIECRDEYKYNVEAVELLIRNH
LVNMQQYDLHLAQSMENGLNYMAVAFAMQLVKILLVDERSVAHVTEADLFHTIETLMRIN
AHSRGNAPEGLPQLMEVVRSNYEAMIDRAHG GPNFMMHSGISQASEYDDPPGLREKA EYL
LREWVNLYHSAAAGRDSTKAFSAFVGQMHQQGILKTDDLI TRFFRLCTEMCVEISYRAQA
EQQHNPAA NPTMIRAKCYHNLD AFVRLIALLVKHSGEATNTVT KINLLNKVLGIVGVLL
QDHDVRQSEFQQLPYHRIFIMLLLELNAPEHVLETINFQTLTAF CNTFHILRPTKAPGFV
YAWLELISHRIFIARMLAHTPQQKGWPMYAQLLIDLFKYLA PFLRNVELTKPMQILYKGT
LRVLLVLLHDFPEFLCDYHYGFC DVI PPNCIQLRNLI LSAPFRNMRLPDPFTPNLKVDML
SEINIAPRI LTNFTGVMPPQFKKDLDSYLKTRSPVTFLSDLR SNLQVSNEPGNRYNLQLI
NALVLYVGTQAI AIAHIHNKGSTPSMSTITHSAHMDIFQNLAVDL DTEGRYLF LNAIANQLR
YPNSHTHYF SCTMLYLFAEANTEA IQEQITRVLLERLIVNRPHPWGLLITFIELIKNPAF
KFWNHEFVHCAPEIEKLFQSVAQCCMGQKQAQQVMEGTGAS

Antisense Oligonucleotides Directed Against:

ERK3

SEQ ID NO:11 5'-ttctctgccatTTTgaaacc-3'

SEQ ID NO:12 5'-ctctgccatTTTgaaaccct-3'

SEQ ID NO:13 5'-ctgccatTTTgaaaccctta-3'

PRKAR1A

SEQ ID NO:14 5'-ccagactccatggttctctg-3'

SEQ ID NO:15 5'-agactccatggttctctggg-3'

SEQ ID NO:16 5'-actccatggttctctgggga-3'

KRT23 (209)

SEQ ID NO:17 5'-tgcttctccatTTTcttgagg-3'

SEQ ID NO:18 5'-cttctccatTTTcttgagggtt-3'

SEQ ID NO:19 5'-tctccatTTTcttgagggttga-3'

PN7098

SEQ ID NO:20 5'-ttagccaccatggagagcaa-3'

SEQ ID NO:21 5'-agccaccatggagagcaatt-3'

SEQ ID NO:22 5'-ccaccatggagagcaattag-3'

AL117237

SEQ ID NO:23 5'-ttcctcagcatagatTTTtat-3'

SEQ ID NO:24 5'-cctcagcatagatTTTtatga-3'

SEQ ID NO:25 5'-tcagcatagatTTTtatgaga-3'

PCNT2

SEQ ID NO:26 5'-tcaacttccatctccctcag-3'

SEQ ID NO:27 5'-aacttccatctccctcagac-3'

SEQ ID NO:28 5'-cttccatctccctcagactc-3'

PROX1

SEQ ID NO:29 5'-tggtcaggcatcactggacg-3'

SEQ ID NO:30 5'-gtcaggcatcactggacggt-3'

SEQ ID NO:31 5'-caggcatcactggacggtta-3'

HOOK1

SEQ ID NO:32 5'-gtctcctccatggccggcg-3'

SEQ ID NO:33 5'-ctcctccatggccggcgccg-3'

SEQ ID NO:34 5'-cctccatggccggcgccgcc-3'

IGHG1

No ATG identified. Used three different sequences, one from the beginning, middle, and end.

SEQ ID NO:35 5'-gaggagggtgccagggggaa-3'

SEQ ID NO:36 5'-cagggtcttcgtggctcacg-3' :

SEQ ID NO:37 5'-ctgcgtgtagtggttgca-3'

GOLGA2

SEQ ID NO:38 5'-accgactccattaccagccc-3'

SEQ ID NO:39 5'-cgactccattaccagcccct-3'

SEQ ID NO:40 5'-actccattaccagcccctga-3'

KIAA0555

SEQ ID NO:41 5'-ttcttggacattgttccttt-3'

SEQ ID NO:42 5'-cttggacattgttcctttct-3'

SEQ ID NO:43 5'-tggacattgttcctttctaa-3' :

LRPPRC

SEQ ID NO:44 5'-gcttcctccatttttgccag-3'

SEQ ID NO:45 5'-ttcctccatttttgccagga-3'

SEQ ID NO:46 5'-cctccatttttgccaggaaa-3'

SET

SEQ ID NO:47 5'-tgcgccgacatggtgctgct-3'

SEQ ID NO:48 5'-cgccgacatggtgctgctcc-3'

SEQ ID NO:49 5'-ccgacatggtgctgctccgc-3'

TL21

No ATG identified. Used three different sequences, one from the beginning, middle, and end.

SEQ ID NO:50 5'-cttttttcagttcctttggtc-3'

SEQ ID NO:51 5'-catttttctcaagtccttctc-3'

SEQ ID NO:52 5'-taatccaggataactcagca-3'

KAISO

SEQ ID NO:53 5'-ctactctccatgcctgcttc-3'

SEQ ID NO:54 5'-actctccatgcctgcttccc-3'

SEQ ID NO:55 5'-tctccatgcctgcttcccgg-3'

PN7771

SEQ ID NO:56 5'-acctcagccatctgcaacaa-3'

SEQ ID NO:57 5'-ctcagccatctgcaacaagg-3'

SEQ ID NO:58 5'-cagccatctgcaacaaggct-3'

TSP3

SEQ ID NO:59 5'-tgcgtctccatgcctctcag-3'

SEQ ID NO:60 5'-cgtctccatgcctctcagcc-3'

SEQ ID NO:61 5'-tctccatgcctctcagccgg-3'

MDH1

No ATG identified. Used three different sequences, one from the beginning, middle, and end.

SEQ ID NO:62 actctgattggttcagacat

SEQ ID NO:63 5'-cagtcacaccaagtttaaga-3'

SEQ ID NO:64 5'-ttgattacaacaggggaatga-3'

GA17

SEQ ID NO:65 5'-gggacgctcatggtgcaggc-3'

SEQ ID NO:66 5'-gacgctcatggtgcaggccc-3'

SEQ ID NO:67 5'-cgctcatggtgcaggcccgg-3'

CAPN4

SEQ ID NO:68 5'-accaggaacatggctgcgac-3'

SEQ ID NO:69 5'-caggaacatggctgcgactc-3'

SEQ ID NO:70 5'-ggaacatggctgcgactcac-3'

BAT3

SEQ ID NO:71 5'-ttaggctccatggccgacag-3'

SEQ ID NO:72 5'-aggctccatggccgacaggt-3'

SEQ ID NO:73 5'-gctccatggccgacaggtct-3'

ABLIM1

SEQ ID NO:74 5'-aaggcaggcatcttggcatg-3'

SEQ ID NO:75 5'-ggcaggcatcttggcatgga-3'

SEQ ID NO:76 5'-caggcatcttggcatggatt-3'

NICE-4

SEQ ID NO:77 5'-gatgtcatcatttacagtat-3'

SEQ ID NO:78 5'-tgtcatcatttacagtatat-3'

SEQ ID NO:79 5'-tcatcatttacagtatatac-3'

CYT4

SEQ ID NO:80 5'-cacagggtccattccgacgcc-3'

SEQ ID NO:81 5'-cagggtccattccgacgcctc-3'

SEQ ID NO:82 5'-gggtccattccgacgcctctg-3'

JNK3A2

SEQ ID NO:83 5'-tggagggtcataaataccac-3'

SEQ ID NO:84 5'-gagggtcataaataccacag-3'

SEQ ID NO:85 5'-gggtcataaataccacagct-3'

C-NAP1

SEQ ID NO:86 5'-cttgtctccatgagggcacc-3'

SEQ ID NO:87 5'-tgtctccatgagggcaccag-3'

SEQ ID NO:88 5'-tctccatgagggcaccaggt-3'

VCL(1066)

SEQ ID NO:89 5'-aacactggcatcgcggcggc-3'

SEQ ID NO:90 5'-cactggcatcgcggcggcga-3'

SEQ ID NO:91 5'-ctggcatcgcggcggcgagc-3'

PSF

SEQ ID NO:92 5'-tcccgagacatgtctgtggt-3'

SEQ ID NO:93 5'-ccgagacatgtctgtggtca-3'

SEQ ID NO:94 5'-gagacatgtctgtggtcaag-3'

FNTA

There are only 6 nucleotides before the start codon, so I used 11 nucleotides after the start codon to maintain the 20 nucleotides and I didn't shift left.

SEQ ID NO:95 5'-cctcggtggccgcatctcg-3'

SEQ ID NO:96 5'-tcggtggccgcatctcgcc-3'

TPRD

SEQ ID NO:97 5'-aaattgtccatggtgcacaa-3'

SEQ ID NO:98 5'-attgtccatggtgcacaagt-3'

SEQ ID NO:99 5'-tgtccatggtgcacaagtct-3'

PN9190

No ATG identified. Used three different sequences, one from the beginning, middle, and end.

SEQ ID NO:100 5'-ctataactactactgtgcat-3'

SEQ ID NO:101 5'-gtactcttctttaaccagtg-3'

SEQ ID NO:102 5'-ggctctgtgtgtctgggggac-3'

PPL

There are only 11 nucleotides identified before the start codon so I didn't shift to the left.

SEQ ID NO:103 5'-agcgagttcatggtggcgct-3'

SEQ ID NO:104 5'-cgagttcatggtggcgctcg-3'

Golgin-84

SEQ ID NO:105 5'-aaccaagacatgatggcagc-3'

SEQ ID NO:106 5'-ccaagacatgatggcagcag-3'

SEQ ID NO:107 5'-aagacatgatggcagcagga-3'

CLIC1

SEQ ID NO:108 5'-cacagtaccatgaacagtct-3'

SEQ ID NO:109 5'-cagtaccatgaacagtctct-3'

SEQ ID NO:110 5'-gtaccatgaacagtctctgg-3'

AKR7A2

SEQ ID NO:111 5'-ggccgggacatggcgagcgc-3'

SEQ ID NO:112 5'-ccgggacatggcgagcgcgc-3'

SEQ ID NO:113 5'-gggacatggcgagcgcgcg-3'

UNR(798)

SEQ ID NO:114 5'-tcaaagctcatctcgagtg-3'

SEQ ID NO:115 5'-aaagctcatctcgagtgat-3'

SEQ ID NO:116 5'-agctcatctcgagtgatac-3'

GBDR1

SEQ ID NO:117 5'-tgcacgaacatcccgccgcc-3'

SEQ ID NO:118 5'-cacgaacatcccgccgccgc-3'

SEQ ID NO:119 5'-cgaacatcccgccgccgcg-3'

KIAA0614

No nucleotides were identified before the start codon, so I chose three different 20 nucleotide sequences from the beginning, middle, and end.

SEQ ID NO:120 5'-actgtatctccttccaccat-3'

SEQ ID NO:121 5'-gattgactttctttacaaga-3'

SEQ ID NO:122 5'-gaacatctccagggtcccccc-3'

LDHM

SEQ ID NO:123 5'-agagttgccatattggactt-3'

SEQ ID NO:124 5'-agttgccatattggacttgg-3'

SEQ ID NO:125 5'-ttgccatattggacttggaa-3'

EIF3S10

SEQ ID NO:126 5'-taggccggcatcttggcggc-3'

SEQ ID NO:127 5'-ggccggcatcttggcggcag-3'

SEQ ID NO:128 5'-ccggcatcttggcggcaggc-3'

SLAP2

SEQ ID NO:129 5'-ttttcttccatttcacatctat-3'

SEQ ID NO:130 5'-ttcttccatttcacatctat-3'

SEQ ID NO:131 5'-cttccatttcacatctat-3'

SART-1

SEQ ID NO:132 5'-gacgaccccatagtggcacg-3'

SEQ ID NO:133 5'-cgaccccatagtggcacg-3'

SEQ ID NO:134 5'-accccatagtggcacgcca-3'

ITRAF

SEQ ID NO:135 5'-tttttatccattcctcttcg-3'

SEQ ID NO:136 5'-tttatccattcctcttcg-3'

SEQ ID NO:137 5'-tatccattcctcttcg-3'

NUMA1

SEQ ID NO:138 5'-tgagtgatcatcttggtgat-3'

SEQ ID NO:139 5'-gagtgatcatcttggtgat-3'

SEQ ID NO:140 5'-gtgatcatcttggtgatcca-3'

SPA1

SEQ ID NO:141 5'-cacatgggcatgctctgtgg-3'

SEQ ID NO:142 5'-catgggcatgctctgtgggc-3'

SEQ ID NO:143 5'-tgggcatgctctgtgggcct-3'

FYCO1

SEQ ID NO:144 5'-gtggaggccatggtgagttt-3'

SEQ ID NO:145 5'-ggaggccatggtgagtttgc-3'

SEQ ID NO:146 5'-aggccatggtgagtttgcct-3'

DNCL1

SEQ ID NO:147 5'-cggtcgcacatggttaccgt-3'

SEQ ID NO:148 5'-gtcgcacatggttaccgtgg-3'

SEQ ID NO:149 5'-cgcacatggttaccgtggag-3'

ACTB

SEQ ID NO:150 5'-tcatcatccatggtgagctg-3'

SEQ ID NO:151 5'-atcatccatggtgagctggc-3'

SEQ ID NO:152 5'-catccatggtgagctggcgg-3'

KU70

SEQ ID NO:153 5'-caccctgacatggttggttac-3'

SEQ ID NO:154 5'-ccctgacatggttggtactg-3'

SEQ ID NO:155 5'-ctgacatggttggtactgct-3'

COPP

SEQ ID NO:156 5'-cgagaggcatggtgcgtcg-3'

SEQ ID NO:157 5'-cagaggcatggtgcgtcggt-3'

SEQ ID NO:158 5'-gaggcatggtgcgtcggtcc-3'

OSTP

SEQ ID NO:159 5'-gcaattctcatggtagtgag-3'

SEQ ID NO:160 5'-aattctcatggtagtgagtt-3'

SEQ ID NO:161 5'-ttctcatggtagtgagtttt-3'

SLC8A1

SEQ ID NO:162 5'-atgttgtagacatgacacttcc-3'

SEQ ID NO:163 5'-gttgtagacatgacacttccaa-3'

SEQ ID NO:164 5'-tgtacatgacacttccaact-3'

A2-CAT

SEQ ID NO:165 5'-gccgaagtcatgctccctct-3'

SEQ ID NO:166 5'-cgaagtcatgctccctctgt-3'

SEQ ID NO:167 5'-aagtcatgctccctctgtgg-3'

THRSP

Only 10 nucleotides were identified before the start codon, so I included 7 nucleotides after the start codon and I didn't shift left two spots.

SEQ ID NO:168 5'-tagcacctgcatggttgctt-3'

SEQ ID NO:169 5'-gcacctgcatggttgcttcc-3'

OPA1

SEQ ID NO:170 5'-agtcgccacatcccgccggc-3'

SEQ ID NO:171 5'-tcgccacatcccgccggcgg-3'

SEQ ID NO:172 5'-gccacatcccgccggcgggg-3'

PN12218

SEQ ID NO:173 5'-gcggagcagtgacgcggcat-3'

SEQ ID NO:174 5'-gaggcctcttccacaggaaa-3'

SEQ ID NO:175 5'-atgctgctgctcagctgcat-3'

CIN85

SEQ ID NO:176 5'-ggcctccaccattgcgtcga-3'

SEQ ID NO:177 5'-atggcctccaccattgcgtc-3'

SEQ ID NO:178 5'-ctatggcctccaccattgcg-3'

PN13734

SEQ ID NO:179 5'-gatcctgtccattagaatgt-3'

SEQ ID NO:180 5'-aggatcctgtccattagaat-3'

SEQ ID NO:181 5'-gcaggatcctgtccattaga-3'

FUBP1

SEQ ID NO:182 5'-atagtctgccatggttgcac-3'

SEQ ID NO:183 5'-gaatagtctgccatggttgc-3'

SEQ ID NO:184 5'-ttgaatagtctgccatggtt-3'

LRP1

SEQ ID NO:185 5'-cggggtcagcatgggtgtggg-3'

SEQ ID NO:186 5'-ggcgggggtcagcatgggtgtg-3'

SEQ ID NO:187 5'-acggcgggggtcagcatggtg-3'

FUS(526) and FUS(525)

SEQ ID NO:188 5'-gtttgaggccatgtccgcgc-3'

SEQ ID NO:189 5'-tcgtttgaggccatgtccgc-3'

SEQ ID NO:190 5'-aatcgtttgaggccatgtcc-3'

XE169

SEQ ID NO:191 5'-ccccggctccatggtgggcc-3'

SEQ ID NO:192 5'-gacccccggctccatggtggg-3'

SEQ ID NO:193 5'-cggacccccggctccatggtg-3'

NAG4

SEQ ID NO:194 5'-cttcttgcccatatccgacc-3'

SEQ ID NO:195 5'-tgcttcttgcccatatccga-3'

SEQ ID NO:196 5'-tgtgcttcttgcccatatcc-3'

ESRRA

SEQ ID NO:197 5'-gagctcatctccaatcccat-3'

SEQ ID NO:198 5'-agcaggggaaggggcccggga-3'

SEQ ID NO:199 5'-gggccagcactttgcccgc-3'

CTNNB1

SEQ ID NO:200 5'-ttgagtagccattgtccacg-3'

SEQ ID NO:201 5'-gcttgagtagccattgtcca-3'

SEQ ID NO:202 5'-cagcttgagtagccattgtc-3'

CIT

SEQ ID NO:203 5'-gaacttcaacatctccccac-3'

SEQ ID NO:204 5'-ttgaacttcaacatctcccc-3'

SEQ ID NO:205 5'-atttgaacttcaacatctcc-3'

HSBP1

SEQ ID NO:206 5'-aaagaggctcattcccgtac-3'

SEQ ID NO:207 5'-tcaaagaggctcattcccgt-3'

SEQ ID NO:208 5'-gatcaaagaggctcattccc-3'

ROCK2

SEQ ID NO:209 5'-gggccgggctcatgccgccac-3'

SEQ ID NO:210 5'-ggggggccgggctcatgccgcc-3'

SEQ ID NO:211 5'-gcggggggccgggctcatgccg-3'

TILP (392)

SEQ ID NO:212 5'-ctaccagtgcattccatgaca-3'

SEQ ID NO:213 5'-ttctaccagtgcattccatga-3'

SEQ ID NO:214 5'-tcttctaccagtgcattccat-3'

LRRFIP2a

SEQ ID NO:215 5'-aggagtcccatcttggtt-3'

SEQ ID NO:216 5'-gcaggagtcccatcttg-3'

SEQ ID NO:217 5'-aagcaggagtcccatcttg-3'

PSAP

SEQ ID NO:218 5'-gagggcggtacatagcaccgt-3'

SEQ ID NO:219 5'-aagagggcggtacatagcacc-3'

SEQ ID NO:220 5'-ggaagagggcggtacatagca-3'

NOTCH2

SEQ ID NO:221 5'-cagggcgggcatcttctcgg-3'

SEQ ID NO:222 5'-cgcagggcgggcatcttctc-3'

SEQ ID NO:223 5'-ggcgcagggcgggcatcttc-3'

Peptide Fragments

Of PRAK Interactors

ERK3

SEQ ID NO:224 PMDEPISSHPFHIEDEVDDI
SEQ ID NO:225 TEPCWQYSDHHENKYCDLEC
SEQ ID NO:226 LISKSVSQEKQEKGMANLAQ
SEQ ID NO:227 GEFLFNKQLESIGIPQFHSP
SEQ ID NO:228 VWRESEVNHYEYPKLIIDLS
SEQ ID NO:229
QFSEHDWPVHNNFDIDEVQLDPRALSDVTDEEEVQVDPRKYLDGDREKYL
SEQ ID NO:230
NSGEFLFNKQLESIGIPQFHSPVGSPLKSIQATLTPSAMKSSPQIPHQTY

PRKAR1A

SEQ ID NO:231 MESGSTAASEEARSLRECEL
SEQ ID NO:232 YVQKHNIQALLKDSIVQLCT
SEQ ID NO:233 ARPERPMAFLREYFERLEKE
SEQ ID NO:234 EAKQIQNLQKAGTRTDSRED
SEQ ID NO:235 EISPPPPNPVVKGRRRRGAI
SEQ ID NO:236
EAKQIQNLQKAGTRTDSREDEISPPPPNPVVKGRRRRGAISAEVYTEEDA
SEQ ID NO:237
AASEEARSLRECELYVQKHNIQALLKDSIVQLCTARPERPMAFLREYFER

KRT29 (209)

SEQ ID NO:238 MEKHHVPSDFNVNVKVD TGP
SEQ ID NO:239 REDLIKVLEDMRQEYELIIK

PN7098

SEQ ID NO:240 DEEDYTEPVADNETDYVEVM
SEQ ID NO:241 MQAYDHLSYETPYETPQDEG
SEQ ID NO:242 EITKPKRIRPSFKEAALRAY
SEQ ID NO:243 VCGGAGGGLYGIDSMPDLRR
SEQ ID NO:244 FKKTLQALIYPMSSTIPHNF
SEQ ID NO:245
LYGIDSMPDLRRKKTLP IVRDVAMTLAARKSGLSLAMVIRTSLNNEELKM
SEQ ID NO:246
LSYETPYETPQDEGYDGPADDMVSEEGLEPLNETSAEMEIREDENQNIPE

AL117237

SEQ ID NO:247 YLGLALDVDRIKKDQEEEEED
SEQ ID NO:248 DQGPPCPRLSRELLEVVEPE
SEQ ID NO:249 LQDSLDRCYSTPSSCLEQPD
SEQ ID NO:250 SCQPYGSSFYALEEKHVGF

SEQ ID NO:251

YLGLALDVDRIKKDQEEEEEDQGPPCPRLSRELLEVVEPEVLQDSLDRCY

SEQ ID NO:252

RLSRELLEVVEPEVLQDSLDRCYSTPSSCLEQPDSCQPYGSSFYALEEKH

PCNT2

SEQ ID NO:253 TPEQRGIFTISDHPAEQRGM

SEQ ID NO:254 AVHGLELEALRLSLSNMHTA

SEQ ID NO:255 HELELLREQHAREKEEVVLR

SEQ ID NO:256 EDLQSEHGRCLEDLEFKFKE

SEQ ID NO:257 LSELHEQLLARTSRVEDLEQ

SEQ ID NO:258

ELEALRLSLSNMHTAQLELTQANLQKEKETALTELREMLNSRRAQELALL

SEQ ID NO:259

KELSAKHQSEMEDLQNQFQKELAEQRAELEKIFQDKNQAERALRNLESHH

PROX1

SEQ ID NO:260 QQLEDMQKQLLHVQEKFYQI

SEQ ID NO:261 ELDPGQFIDRARALIREQEM

SEQ ID NO:262 SQVVDTVVKVFSAPSRQVP

SEQ ID NO:263 PLQIPQARFAVNGENHNFHT

SEQ ID NO:264 TFGNVQMASSTDQTEALPLV

SEQ ID NO:265

FSAKPSRQVPQVFPPLQIPQARFAVNGENHNFHTANQRLQCFGDV I I PNP

SEQ ID NO:266

RESYRENKRKQKLPPQQQQSFQQLVSARKEQKREERRQLKQQLEDMQKQL

HOOK1

SEQ ID NO:267 MEETQPPPQPKLPLCDSLMI

SEQ ID NO:268 WLQTFNTASPCQDVKQLTSG

SEQ ID NO:269 EELQEALAEKEELRQRCEEL

SEQ ID NO:270 IDVLRATSDKANKLESTVEI

SEQ ID NO:271 YRQKLQDLNDLRKQVKTLQE

SEQ ID NO:272

EDVGDNWRIKASNVKKVLQGIMSYYHEFLGQQISEALIPDLNQITECSDP

SEQ ID NO:273

RALEELQEALAEKEELRQRCEELDMQVTTLQDEKNSLVSENNMMNEKLDQ

IGHG1

SEQ ID NO:274 SVFLFPPKPKDTLMISRTPE

SEQ ID NO:275 VTCVVVDVSHEDPEVKFNWY

SEQ ID NO:276 VDGVEVHNAKTKPREEQYNS

SEQ ID NO:277 CLVKGFYPSDIAVEWESNGQ

SEQ ID NO:278 PENNYKTTTPVLDSGGSFFL

SEQ ID NO:279

TYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQV

SEQ ID NO:280
DIAVEWESNGQPENNYKTTTPVLDSGSSFFLYSKLTVDKSRWQQGNVFSC

GOLGA2

SEQ ID NO:281 EQQLQAEAEHLRKELEGLAG
SEQ ID NO:282 QLQAQVQDNEGLSRLNREQE
SEQ ID NO:283 QAQVQDNEGLSRLNREQEER
SEQ ID NO:284
EQQLQAEAEHLRKELEGLAGQLQAQVQDNEGLSRLNREQEERLLELERAA
SEQ ID NO:285
AEHLRKELEGLAGQLQAQVQDNEGLSRLNREQEERLLELERAAELWGEQA

KIAA0555

SEQ ID NO:286 AEESELRFRLTKEYQALQR
SEQ ID NO:287 AYALLQEQTGGIIDAEREAK
SEQ ID NO:288 AQEQLQAEVRLRYKAKIEDLE
SEQ ID NO:289 ATLAQKGQIEKQEAENHRLQ
SEQ ID NO:290 QELQDARDQNELLEFRNLEL
SEQ ID NO:291
AEESELRFRLTKEYQALQRAYALLQEQTGGIIDAEREAKAQEQLQAEVL
SEQ ID NO:292
RYKAKIEDLEATLAQKGQIEKQEAENHRLQQELQDARDQNELLEFRNLEL

LRPPRC

SEQ ID NO:293 MEEANIQPNRVTYQRLIASY
SEQ ID NO:294 MENAENILTVMRDAGIEPGP
SEQ ID NO:295 QTLEKVEKFELHLMRDLLQ
SEQ ID NO:296 VFGSFFLQHCVTMNTPEVKL
SEQ ID NO:297 TDYCKKLKEVQMHSFPLQFT
SEQ ID NO:298
MENAENILTVMRDAGIEPGPDTYLALLNAYAEGDIDHVKQTLEKVEKFE
SEQ ID NO:299
IIFSFSKAGYLSMSQKFWKKFTCERRYIPDAMNLILLLVTEKLEDVALQI

Of MAPKAP-K2 Interactors

SET(277)

SEQ ID NO:300 LTRVEVTEFEDIKSGYRIDF
SEQ ID NO:301 YFDENPYFENKVLSKEFHLN
SEQ ID NO:302 TKRSSQTQNKASRKQHEEP
SEQ ID NO:303 ESFFTWFTHSDAGADELGE
SEQ ID NO:304 VIKDDIWPNPLQYYLVPMMD
SEQ ID NO:305
LTRVEVTEFEDIKSGYRIDFYFDENPYFENKVLSKEFHLNESGDPSSKST
SEQ ID NO:306
EIKWKSGKDLTKRSSQTQNKASRKQHEEPESFFTWFTHSDAGADELGE

Of MAPKAP-K3 Interactors

KAISO

SEQ ID NO:307 GVGSKHLMEGQKIITLDTAT
SEQ ID NO:308 EIEGLSTGCKVYANIGEDTY
SEQ ID NO:309 DIVIPVKDDPDEGEARLENE
SEQ ID NO:310 HEIHHTGERRYQCLACGKSF
SEQ ID NO:311 INYQFMSSHIKSVHSQDPSG
SEQ ID NO:312
HDDHYELIVDGRVYYICIVCKRSYVCLTSLRRHFNIHSWEKKYPCRYCEK
SEQ ID NO:313
YQCLACGKSFINYQFMSSHIKSVHSQDPSGDSKLYRLHPCRSLQIRQYAY

PN7771

SEQ ID NO:314 LSLKENSRLLENELLENAEKL
SEQ ID NO:315 AEYENLTNKLQRNLENVLAE
SEQ ID NO:316 KFGDLPSSAEFFLQEERLT
SEQ ID NO:317 QMRNEYERQCRVLQDQVDEL
SEQ ID NO:318 QSELEEYRAQGRVLRPLKN
SEQ ID NO:319
QVVREKEKLRSDDLKAEKLKSLMASEVDDHAAIERRNEYNLRLKLDGEYK
SEQ ID NO:320
SEECNPLNMSIEAELVIEQMKEQHHRDICCLRLELEDKVRHYEKQLDET

TSP3

SEQ ID NO:321 ILVELRDDIRDQVKEMSLIR
SEQ ID NO:322 NTIMECQVCGFHEQRSHCSP
SEQ ID NO:323 GPCPPGLQNGTHCSINEC
SEQ ID NO:324 AHADPCFPGSSCINTMPGFH
SEQ ID NO:325 CEACPRGYKGTQVSGVGIDY
SEQ ID NO:326
AVTNALHSILGEQTKALVTQLTLFNQILVELRDDIRDQVKEMSLIRNTIM
SEQ ID NO:327
INECAHADPCFPGSSCINTMPGFHCEACPRGYKGTQVSGVGIDYARASKQ

MDH1

SEQ ID NO:328 MSEPIRVLVLTGAAGQIAYSL
SEQ ID NO:329 AFKDLDVAILVGSMPRREGM
SEQ ID NO:330 VIIWGNHSSTQYPDVNHAKV
SEQ ID NO:331 VIIWGNHSSTQYPDVNHAKV
SEQ ID NO:332 SSAMSAKAICDHVRDIWFG
SEQ ID NO:333
KKS VKVIVVGNPANTNCLTASKSAPSIPKENFSCLTRL DHNRAKAQIALK
SEQ ID NO:334
QYPDVNHAKVKLQKKEVGVYEALKDDSWLKGEFVTTVQQRGAAVIKARKL

GA17

SEQ ID NO:335 ESVVNSVVSLLLLILEPDKQE
SEQ ID NO:336 ALIESLCEKLVKFRGERPS
SEQ ID NO:337 LTIFVSAKLASYVKFYQNNK
SEQ ID NO:338 DFIDSLGLLHEQNMAMRLL
SEQ ID NO:339 LQIGADDVEAFVIDAVRTKM
SEQ ID NO:340
MSVPAFIDISEEDQAAELRAYLKSKGAEISEENSEGGLHVDLAQII EACD
SEQ ID NO:341
LQIGADDVEAFVIDAVRTKMVYCKIDQTQRKVVVSHSTHRTFGKQRWQQL

CAPN4

SEQ ID NO:342 RQFRRLFAQLAGDDMEVSAT
SEQ ID NO:343 MNILNKVVTRHPDLKTDGFG
SEQ ID NO:344 TCRSMVAVMDSDDTGKLGFE
SEQ ID NO:345 FDTDRSGTICSELPGAFEA
SEQ ID NO:346 AGFHLNEHLYNMIIRRYSD
SEQ ID NO:347
EAAGFHLNEHLYNMIIRRYSDSGNMDFDNFISCLVRLDAMFRAFKSLDK
SEQ ID NO:348
MNILNKVVTRHPDLKTDGFGIDTCRSMVAVMDSDDTGKLGFEFKYLWNN

BAT3

SEQ ID NO:349 ERAPAQNPCLTPGPAPAGPT
SEQ ID NO:350 PAPETNAPNHPSPA EYVEVL
SEQ ID NO:351 QELQRLESRLQPFLQRYEYV
SEQ ID NO:352 ESSAEGAPPPGPAPPPATSH
SEQ ID NO:353 PRVIRISHQSVEPVMMHMN
SEQ ID NO:354
ERAPAQNPCLTPGPAPAGPTPAPETNAPNHPSPA EYVEVLQELQRLESRL
SEQ ID NO:355
LGAAATTDYNNNHEGREEDQRLINLVGESLRLLGNTFVALSDLRCNLACT

Of MSK-1 Interactors

ABLIM1 (778)

SEQ ID NO:356 GKTYHPNCFACKICKRPFPP
SEQ ID NO:357 GDRVTFNGRDCLCQLCAQPM
SEQ ID NO:358 SSSPKETTFSSNCAGCGRDI
SEQ ID NO:359 DIKNGQALLALDKQWHLGCF
SEQ ID NO:360
GKTYHPNCFACKICKRPFPPGDRVTFNGRDCLCQLCAQPMSSSPKETTF
SEQ ID NO:361
RDCLCQLCAQPMSSSPKETTFSSNCAGCGRDIKNGQALLALDKQWHLGCF

NICE-4

SEQ ID NO:362 TTQHSSTLSTQQNTLSSSTS
SEQ ID NO:363 HSSSSTFSTTSSTVSAPPPV
SEQ ID NO:364 VSVSSSLNSGSSLGLSLGSN
SEQ ID NO:365 NLPPGVPPLLPNPYIMAPGL
SEQ ID NO:366 LHAYPPQVGYDDLQMLQTR
SEQ ID NO:367
TSVESEANLHSSSSTFSTTSSTVSAPPPVSVSVSSSLNSGSSLGLSLGSNS
SEQ ID NO:368
GLLHAYPPQVGYDDLQMLQTRFPLDYYSIPFPTPTTPLTGRDGLASNP

Of p38 ALPHA or MAPK14(360) Interactors

CYT4

SEQ ID NO:369 PEPaelSSGETEELQRIKWH
SEQ ID NO:370 KEKELCIGRKKFNMDPAKGI
SEQ ID NO:371 INLQVLQAFVDCHEFANLNL
SEQ ID NO:372 STDTCYVLSFSIIMLNTSLH
SEQ ID NO:373 DRMMEAFATRYCLCNPGVFQ
SEQ ID NO:374
KFNMDPAKGIQYFIEHKLLTPDVQDIARFLYKGEGLNKTAIGTYLGERDP
SEQ ID NO:375
VDCHEFANLNLVQALRQFLWSFRLPGEAQKIDRMMEAFATRYCLCNPGVF

JNK3A2

SEQ ID NO:376 RPKYAGLTFPKLFPDSLFP
SEQ ID NO:377 DSEHNKLKASQARDLLSKML
SEQ ID NO:378 VNSSESLPPSSSVNDISSMS
SEQ ID NO:379 TDQTLASDTSLEASAGPL
SEQ ID NO:380 RNYVENRPKYAGLTFPKLFP
SEQ ID NO:381
VWYDPAEVEAPPPQIYDKQLDEREHTIEWKELIYKEVMNSEKTKNGV
SEQ ID NO:382
KLFPDSLFPADSEHNKLKASQARDLLSKMLVIDPAKRISVDDALQHPYIN

C-NAP1

SEQ ID NO:383 AAVVEARAQASAAGILEEDL
SEQ ID NO:384 RTARSALKLKNEEVESERER
SEQ ID NO:385 AQALQEQGELKVAQGKALQE
SEQ ID NO:386 LELEENHHKMECQKLIKEL
SEQ ID NO:387 AQGKALQENLALLTQTLAER
SEQ ID NO:388
QKLTVQREQIRELEKDRETQRNVLEHQLELEKKDQMIESQRGQVQDLKK
SEQ ID NO:389
RGQIQELEKQREMQAALLESLLDLKKRNQEVDLQQEQIQELEKCRSVLE

VCL(1066)

SEQ ID NO:390 VTRLAKEVAKQCTDKRIRTN
SEQ ID NO:391 LLQVCERIPTISTQLKILST
SEQ ID NO:392 VKATMLGRTNISDEESEQAT
SEQ ID NO:393 EMLVHNAQNLMQSVKETVRE
SEQ ID NO:394 KIRTDAGFTLRWVRKTPWYQ
SEQ ID NO:395
MSRLVRGGSGTKRALIQCAKDIASDEVTRLAKEVAKQCTDKRIRTNLL
SEQ ID NO:396
EQATEMLVHNAQNLMQSVKETVREAEAASIKIRTDAGFTLRWVRKTPWYQ

PSF

SEQ ID NO:397 VGNLPADITEDEFKRLFAKY
SEQ ID NO:398 KPAARKAFERCSEGVFLLTT
SEQ ID NO:399 AQHGTFEYEYSQRWKSLEDEM
SEQ ID NO:400 EKQQREQVEKNMKDAKDKLE
SEQ ID NO:401 LSLLRPGEKTYTQRCRLFG
SEQ ID NO:402
QLRVRFATHAAALSVRNLSPYVSNELLEEAFSQFGPIERAVVIVDDRGRS
SEQ ID NO:403
KPAARKAFERCSEGVFLLTTTPRPVIVEPLEQLDDEDGLPEKLAQKNPMY

Of AKT1 Interactors

FNTA

SEQ ID NO:404 IADILNQDAKNYHAWQHRQW
SEQ ID NO:405 VIQEFKLWDNELQYVDQLLK
SEQ ID NO:406 YFVISNTTGYNDRAVLEREV
SEQ ID NO:407 QYTLEMIKLVPHNESAWNYL
SEQ ID NO:408 KGILQDRGLSKYPNLLNQLL
SEQ ID NO:409
YLKGILQDRGLSKYPNLLNQLLDLQPSHSSPYLIAFLVDIYEDMLENQCD
SEQ ID NO:410
DILNQDAKNYHAWQHRQWVIQEFKLWDNELQYVDQLLKEDVRNNSVWNQR

TPRD

SEQ ID NO:411 NRNSDSAGPFAVPDHLRQDV
SEQ ID NO:412 EALYDQHSNEYVVRNKKLWD
SEQ ID NO:413 MNPQKQCSTLYDYFSQFLEE
SEQ ID NO:414 HGPLDMSNMFSAEYEFFPE
SEQ ID NO:415 ETRQILEKAGGLKPFLGCP
SEQ ID NO:416
EETRQILEKAGGLKPFLGCPFRVVIDNCIALKKVASRLKKRKKKNIKT
SEQ ID NO:417
NRNSDSAGPFAVPDHLRQDVVEEFEALYDQHSNEYVVRNKKLWDMNPQKQC

PPL

SEQ ID NO:418 EFHNSKSSKELDFLREENHK
SEQ ID NO:419 DLKRLSKDKDLEIDELQKRL
SEQ ID NO:420 DWNMFVKLRSQECDWEEISV
SEQ ID NO:421 RYV NKDMSIQELAVLVSGQK
SEQ ID NO:422 VAVKREQRENHLRRSIVVIH
SEQ ID NO:423
LREENHKLQLERQNLQLETRRLQSEINMAATETRDLRNMTVADSGTNHDS
SEQ ID NO:424
RSQECDWEEISVKGPNGESSVIHDRKSGKKFSIEEALQSGRLTPAQYDRY

GOLGIN-84

SEQ ID NO:425 STEKNSLVFQLERLEQQMNS
SEQ ID NO:426 DTETNLAGMYGKVRKAASSI
SEQ ID NO:427 YPIARVFVIIYMALLHLWVM
SEQ ID NO:428 VMIVLLTYTPEMHHDQPYGK
SEQ ID NO:429 MSGIDNGEGTRLRNVPVLFN
SEQ ID NO:430
STEKNSLVFQLERLEQQMNSASGSSSNGSSINMSGIDNGEGTRLRNVPVL
SEQ ID NO:431
DTETNLAGMYGKVRKAASSIDQFSIRLGIFLRRYPIARVFVIIYMALLHL

Of AKT2p55(481) Interactors

CLIC1

SEQ ID NO:432 RYPKLAALNPESNTAGLDIF
SEQ ID NO:433 AKFSAYIKNSNPALNDNLEK
SEQ ID NO:434 VDETSAEDEGVSQRKFLDGN
SEQ ID NO:435 ELTLADCNLLPKLHIVQVVC
SEQ ID NO:436 NAYAREEFASCTPDDEEIEL
SEQ ID NO:437
ESNTAGLDIFAKFSAYIKNSNPALNDNLEKGLLKALKVLDNYLTSPLPEE
SEQ ID NO:438
NLLPKLHIVQVVCCKYRGFTIPEAFRGVHRYLSNAYAREEFASCTPDDEE

AKR7A2

SEQ ID NO:439 GLGLGGGDCRVKIATKANPW
SEQ ID NO:440 EETLHACQRLHQEGKFVELG
SEQ ID NO:441 ELFPCLRHFGLRFYAYNPLA
SEQ ID NO:442 FEAIALVEKALQAAYGASAP
SEQ ID NO:443 TEEGPLEPAVVDAFNQAWHL
SEQ ID NO:444
HQEGKFVELGLSNYASWEVAEICTLCKSNGWILPTVYQGMYNATTRQVET
SEQ ID NO:445
LQAAYGASAPSVTSAALRWMYHHSQLOGAHGDAVILGMSSLEQLEQNLA

TPRD

SEQ ID NO:446 SNRNSDSAGPFAVPDHLRQD
SEQ ID NO:447 EALYDQHSNEYVVRNKKLWD
SEQ ID NO:448 MNPQKQKCSTLYDYFSQFLEE
SEQ ID NO:449 HGPLDMSNKMFSAEYEFFPE
SEQ ID NO:450 ETRQILEKAGGLKPFLGCP
SEQ ID NO:451
EETRQILEKAGGLKPFLGCPRFVVIDNCIALKKVASRLKKRKKKNIKT
SEQ ID NO:452
FAVPDHLRQDVEEFALYDQHSNEYVVRNKKLWDMNPQKQKCSTLYDYFSQF

Of P90RSK or RPS6KA1 Interactors

UNR(798)

SEQ ID NO:453 GQSPTGSVCYERNGEVFYLT
SEQ ID NO:454 KKQARCQGVVCAMKEAFGFI
SEQ ID NO:455 VATDVRLLPQGTIVIFEDISI
SEQ ID NO:456 DKDTKSKVTLLEGDHVRFNI
SEQ ID NO:457 HSHSDHRFLGTVEKEATFSN
SEQ ID NO:458
GFIKCVDRDVRMFFHFSEILDGNQLHIADEVEFTVVPDMLSAQRNHAIRI
SEQ ID NO:459
CAMKEAFGFIERGDDVKEIFFHYSEFKGDLETLQPGDDVEFTIKDRNGKE

Of IKK-alpha Interactor

GBDR1

SEQ ID NO:460 HKLIHAASERVLSDARTILE
SEQ ID NO:461 ENIQDQDVLLLIKKRAPSPPL
SEQ ID NO:462 PKMADVSAEKKKKQDQKAPD
SEQ ID NO:463 KEAILRATANLPSYNMDRAA
SEQ ID NO:464 VQTNMRDFQTELKILVSLI
SEQ ID NO:465
KSITHHKLIHAASERVLSDARTILEENIQDQDVLLLIKKRAPSPPLPKMAD
SEQ ID NO:466
MDRAAVQTNMRDFQTELKILVSLIEVAQKLLALNPDAVELFKKANAMLD

Of IKK-beta Interactors

KIAA0614

SEQ ID NO:467 SSQESLDISLCSTGSLGSLG
SEQ ID NO:468 VVEIRSRAKIEKIRASLFNN
SEQ ID NO:469 GLEDYFNDKSIKGEKLVPGA
SEQ ID NO:470 QTPGNLLHLFFTNRVPPKKV

SEQ ID NO:471 PKFDKSKYSKAGKEQHPVKV
SEQ ID NO:472
EKIRASLFFNNNDLIGLSSLDGEDELMEMSTEEILTVSVVNQSLFDTQGSF
SEQ ID NO:473
SIKGEKLVPGAREVLTEIFKSCAHSEQTSLSLTPAKPIRVSDIYLSKEQIN

LDHM

SEQ ID NO:474 TESRSSFSQHARTSGRVAVE
SEQ ID NO:475 YRFPPKFTLKAGQVVTIWAA
SEQ ID NO:476 RKLVRSVTVVEDDEDEDGDD
SEQ ID NO:477 RLRSPGGRTHLLWLFCLQCH
SEQ ID NO:478 LRGQSGHPLLPPGQLQPPNP
SEQ ID NO:479
RSSFSQHARTSGRVAVEEVDEEGKFVRLRNKSNEDQSMGNWQIKRQNGDD
SEQ ID NO:480
HLLWLFCLQCHGHSQLPQCGGQGWGQLRGQSGHPLLPPGQLQPPNPEPPE

EIF3S10

SEQ ID NO:481 PDFIMAKQVEQLEKEKKELQ
SEQ ID NO:482 DMDLWEQQEEERITTMQLER
SEQ ID NO:483 ERLAEERHNRLEERKRQRKE
SEQ ID NO:484 ERRITYYREKEEEEQRRAE
SEQ ID NO:485 QMLKEREERERAERAKREE
SEQ ID NO:486
RITYYREKEEEEQRRAEQMLKEREERERAERAKREEELREYQERVKKLE
SEQ ID NO:487
MAKQVEQLEKEKKELQERLKNQEKKIDYFERAKRLEEIPLIKSAYEEQRI

SLAP-2

SEQ ID NO:488 QADNDFTNERLTALQENQTR
SEQ ID NO:489 MDEQDLNEPLAKVSLKDDL
SEQ ID NO:490 EEERKAYRNQVEESTKQIQV
SEQ ID NO:491 LHQAAAKVASERDTDIASLQ
SEQ ID NO:492 EDQQREEATRLQGELEKLRK
SEQ ID NO:493
LAKVSLKDDLQGAQSEIEAKQEIQHRLRKELIEAQELARTSKQKCFELQA
SEQ ID NO:494
LHQAAAKVASERDTDIASLQEELKKVRAELERWRKAASEYEKEITSLQNS

SART-1

SEQ ID NO:495 LYSARDLQGLTVEHAIDSFR
SEQ ID NO:496 EKNVELRKKKPDYLPYAEDE
SEQ ID NO:497 SVDDLAQQKPRSILSKYDEE
SEQ ID NO:498 LEGERPHSFRLEQGGTADGL
SEQ ID NO:499 RERELEEIRAKLRLQAQSL
SEQ ID NO:500
LYSARDLQGLTVEHAIDSFREGETMILTLKDKGVLQEEEDVLVNVNLVDK

SEQ ID NO:501
EIRAKLRLQAQSLSTVGPRLASEYLTPEEMVTFKKT KRRVKKIRKKEKEV

GBDR1

SEQ ID NO:502 HKLIHAASERVLSDARTILE
SEQ ID NO:503 ENIQDQDVLLLIKKRAPSP
SEQ ID NO:504 PKMADVSAEEKKKQDQKAPD
SEQ ID NO:505 KEAILRATANLPSYNMDRAA
SEQ ID NO:506 VQTNMRDFQTEL RKILVSLI
SEQ ID NO:507
ITHHKLIHAASERVLSDARTILEENIQDQDVLLLIKKRAPSP
SEQ ID NO:508
APDKEAILRATANLPSYNMDRAAVQTNMRDFQTEL RKILVSLIEVAQKLL

Of IKK-gamma Interactors

ITRAF

SEQ ID NO:509 TENYEQRIREQQEQLSLQQT
SEQ ID NO:510 ETSARSLGSPLLHERGNIEK
SEQ ID NO:511 NDSTFLHSTPERPGILSPAT
SEQ ID NO:512 AIRGPQQPIWKPFNPQSDS
SEQ ID NO:513 VVLSGTDSELHIPRVCEFCQ
SEQ ID NO:514
QLLLVNSTQDNNGCVPLLEDSDTRKNTLT LAQPQDKVISGIAREKLPKV
SEQ ID NO:515
QNLKTTDKTKPSNLVNTCIRTTLDRACLPPGDHNA LYVNSFPLLDPSDA

Of IKK-i Interactors

ITRAF

SEQ ID NO:516 QLLLVNSTQDNNGCVPLLE
SEQ ID NO:517 ETSARSLGSPLLHERGNIEK
SEQ ID NO:518 IQCTDKTDKQEALFTPQAKD
SEQ ID NO:519 NDSTFLHSTPERPGILSPAT
SEQ ID NO:520 QNLKTTDKTKPSNLVNTCIR
SEQ ID NO:521
AIRGPQQPIWKPFNPQSDSVVLSGTDSELHIPRVCEFCQAVFP
SEQ ID NO:522
QDNNGCVPLLEDSDTRKNTLT LAQPQDKVISGIAREKLPK
VRRQEVSSP

NUMA1

SEQ ID NO:523 STQAALQAMEREAEQMGNEL
SEQ ID NO:524 ALEKAARAELEMRLQNALNE
SEQ ID NO:525 QRVEFATLQEALAHALTEKE
SEQ ID NO:526 GKDQELAKLRGLEAAQIKEL

SEQ ID NO:527 EAAQIKELEELRQTVKQLKE
SEQ ID NO:528
AMEREAEQMGNELERLRAALMESQGQQQEERGQQEREVARLTQERGRAQA
SEQ ID NO:529
VEFATLQEALAHALTEKEGKDQELAKLRGLEAAQIKELEELRQTVKQLKE

SPA1

SEQ ID NO:530 LEDEWQAISEIASTCNTILE
SEQ ID NO:531 GTPKSDAEPEPGNLSEKVS
SEQ ID NO:532 LESMLRKLQEDLQEKADRA
SEQ ID NO:533 ALEEEVRSRLRHNNRRLQAES
SEQ ID NO:534 ESAATRLLLASKQLGSPTAD
SEQ ID NO:535
LEDEWQAISEIASTCNTILESLSREGQPIPESGDPKGT
SEQ ID NO:536
QKEKADRAALEEEVRSRLRHNNRRLQAES
ESAATRLLLASKQLGSPTADLA

FYCO1

SEQ ID NO:537 SLVSSYLQTQEMVSNFDLNS
SEQ ID NO:538 QLEVREKQLQERMQQLDREN
SEQ ID NO:539 QWEVTQATQNTVKELQTCLO
SEQ ID NO:540 KNQHLASFPGWLAMAQQKAD
SEQ ID NO:541 NRQSSAQLEQLVKELQLKED
SEQ ID NO:542
LKEDARASLERLVKEMAPLQEELSGKGQEQADQLWRRLOELLAHTSSWEE
SEQ ID NO:543
AVSQQGEQLQTERERGRATAEDNVRLTCLVAELQKQWEVTQATQNTVKEL

Of Survivin/BIRK5 Interactors

DNCL1

SEQ ID NO:544 MCDRKAVIKNADMSEEMQQD
SEQ ID NO:545 SVECATQALEKYNIEKDIAA
SEQ ID NO:546 HIKKEFDKKYNPTWHCIVGR
SEQ ID NO:547 NFGSYVTHETKHFIYFYLGQ
SEQ ID NO:548
AHIKKEFDKKYNPTWHCIVGRNFGSYVTHETKHFIYFYLGQVAILLFKSG
SEQ ID NO:549
MCDRKAVIKNADMSEEMQQDSVECATQALEKYNIEKDIAAHIKKEFDKKY

ACTB

SEQ ID NO:550 KRGILTLYPIEHGIVTNWD
SEQ ID NO:551 QIMFETFNTPAMYVAIQAVL
SEQ ID NO:552 GRDLTDYLMKILTERGYSFT
SEQ ID NO:553 AGRDLTDYLMKILTERGYSF
SEQ ID NO:554 GGTTMYPGIADRMQKEITAL

SEQ ID NO:555

IEHGIVTNWDDMEKIWHHTFYNELRVAPEEHPVLLTEAPLNPKANREKMT

SEQ ID NO:556

KIKIIAPPERKYSVWIGGSILASLSTFQQMWISKQEYDESGPSIVHRKCF

KU70

SEQ ID NO:557 FQDMMGHGSDYSLSEVLWVC

SEQ ID NO:558 AKASRARTKAGDLRDTGIFL

SEQ ID NO:559 DLLRKVRACKETRKRALSRLK

SEQ ID NO:560 RTFNTSTGGLLLPSDTKRSQ

SEQ ID NO:561 YLRPSLFVYPEESLVIGSST

SEQ ID NO:562

DLMHLKKPGGFDISLFYRDIISIAEDEDLRVHFEESKLEDLLRKVRAKE

SEQ ID NO:563

ISVGIYNLVQKALKPPPIKLYRETNEPVKTKTRTFNTSTGGLLLPSDTKR

COPP

SEQ ID NO:564 NQKAAESLADPTEYENLFPG

SEQ ID NO:565 LKEAFVVEEWVKETHADLWP

SEQ ID NO:566 AKQYPLVTPNEERNVMEEGK

SEQ ID NO:567 DFQPSRSTAQQELDGPASP

SEQ ID NO:568 TPVIVASHTANKEEKSLEL

SEQ ID NO:569

VVKLWRENLSKVNQKAAESLADPTEYENLFPGLKEAFVVEEWVKETHADL

SEQ ID NO:570

PASPTPVIVASHTANKEEKSLELEVDLDNLELEDIDTTDINLDEDILDD

OSTP

SEQ ID NO:571 MRIAVICFCLLGITCAIPVK

SEQ ID NO:572 QADSGSSEEKQLYNKYPDVAV

SEQ ID NO:573 PDAVATWLNPDPSQKQNL

SEQ ID NO:574

MRIAVICFCLLGITCAIPVKQADSGSSEEKQLYNKYPDVAVATWLNPDPSQ

SLC8A1

SEQ ID NO:575 NFLDGALVLEVDERDQDDEE

SEQ ID NO:576 RAFYRIQATRLMTGAGNILK

SEQ ID NO:577 NCGTVALTIIRGGDLTNTV

SEQ ID NO:578 DDDIFEEDENFLVHLSNVKV

SEQ ID NO:579 TFEEPVTHVSESIGIMEVKV

SEQ ID NO:580

RREMARILKELKQHPDKEIEQLIELANYQVLSQQQKSRAFYRIQATRLM

SEQ ID NO:581

TATVTIFDDDHAGIFTFEEPVTHVSESIGIMEVKVLRRTSGARGNVIVPYK

A2-CAT

SEQ ID NO:582 AASVEQATQNFLEKGEQIAK

SEQ ID NO:583 KKMVKLNYVAARRQQELKDP
SEQ ID NO:584 PSLEERLESIISGAALMADS
SEQ ID NO:585 FREHANKLVEVANLACSISN
SEQ ID NO:586 SLCPQVINAALTLAARPQSK
SEQ ID NO:587
GTMVRAARALLSAVTRLLILADMADVMRLLSHLKIVEEAEAVKNATNEQ
SEQ ID NO:588
PLNIAIDKMTKKTRDLRRQLRKAVMDHISDSFLETNVPLLVLEAAKSGN

Of COX1 Interactors

THRSP

SEQ ID NO:589 PSLLRDVQLSGPGGQAQAEA
SEQ ID NO:590 TMLKAICVDVDHGLLPREEW
SEQ ID NO:591 QAKVAGSEENGTAETEEVED
SEQ ID NO:592 ESASGELDLEAQFHLHFSSL
SEQ ID NO:593 HHILMHLTEKAQEVTRKYQE
SEQ ID NO:594
PSLLRDVQLSGPGGQAQAEAPDLYTYFTMLKAICVDVDHGLLPREEWQAK
SEQ ID NO:595
ENGTAETEEVEDESASGELDLEAQFHLHFSSLHHILMHLTEKAQEVTRKY

OPA1

SEQ ID NO:596 LVKLAPDFDKIVESLSLLKD
SEQ ID NO:597 DFFTSGSPEETAFRATDRGS
SEQ ID NO:598 KELRKLVQKDDKGIHHRKL
SEQ ID NO:599 KTSVLEMIAQARIFPRGSGE
SEQ ID NO:600 HEIELMRKNVKEGCTVSPE
SEQ ID NO:601
FRKVSDKEKIDQLQEELLHTQLKYQRIERLEKENKELRKLVQKDDKGI
SEQ ID NO:602
MTRSPVKVTLSEGP HHVALFKDSSREFDLTKEEDLAALRHEIELMRKNV

Of SET(277) Interactor

PN12218

SEQ ID NO:603 TKGHSYPPGPAEVSRLRRCR
SEQ ID NO:604 SAQSPERQSPLEPRPVSP
SEQ ID NO:605 AALDALDKAQRQLQACKRRE
SEQ ID NO:606 AREKRAQADARQTLKEHVQD
SEQ ID NO:607 EKRAQADARQTLKEHVQDFA
SEQ ID NO:608
PLGAQADEAGCSAQSPERQSPLEPRPVSPSAYMLRLPPPAGAYIQNEH
SEQ ID NO:609
PLGAQADEAGCSAQSPERQSPLEPRPVSPSAYMLRLPPPAGAYIQNEH

Of ZFP36 Interactors

CIN85

SEQ ID NO:610 AIVEFDYQAQHDELTVISVG
SEQ ID NO:611 KKDPLTNKAPEKPLHEVPSG
SEQ ID NO:612 VGDIEVVGEVEEGWWEGLV
SEQ ID NO:613 SESDGGDSSSTKSEGANSTV
SEQ ID NO:614 EKTIGKKLPATTATPDSSKT
SEQ ID NO:615
HDELTVISVGEIITNIRKEDGGWWEGLVINGRRGLFPDNFVREIKKEMKKD
SEQ ID NO:616
TKSEGANSTVATAAIQPKKVKGVGFGDIFKDKPIKLRPRSIEVENDFLPV

PN13734

SEQ ID NO:617 EHGEFPIQACMTFLKRRCPSTLGG
SEQ ID NO:618 QACAGSVSQELSETILTMVANCSNVMNKA
SEQ ID NO:619 GMTSLSIGGSAAPHTQSMQGFPPNLGS
SEQ ID NO:620 LPVGGLGTGSLTGIGTGALGLPAVNNDPF
SEQ ID NO:621 ANQHFSKEIDDEANSYFQRIYNHP
SEQ ID NO:622
FEEYRFFPQYPDKELHITACLFGGIIEKGLVTYMALGLALRYVLEALRKP
SEQ ID NO:623
DTLLVATDQTERIVEPPENIQEKIAFIFNNLSQSNMTQKVEELKETVKEE

Of TIAL1(375) Interactors

FUBP1

SEQ ID NO:624 MADYSTVPPPSSGSAGGGGGGGGGGVN
SEQ ID NO:625 EQISRIQQESGCKIQIAPDS
SEQ ID NO:626 EQISRIQQESGCKIQIAPDS
SEQ ID NO:627 PYKVQQAKEMVLELIRDQGG
SEQ ID NO:628 RGRGQGNWNMGPPGGLQEFN
SEQ ID NO:629
MGYPNPAPYNPGPPGPAPHGPPAPYAPQGWGNAYPHWQQQAPPDPAKAGT
SEQ ID NO:630
GGQKRPLEDGDQPDAAKKVAPQNDSTFGTQLPPMHQQQSR SVMTEEYKVPDG

Of CLIC1 Interactors

LRP1

SEQ ID NO:631 EWLCLLSPSGPVCTCPNGKRLDN
SEQ ID NO:632 NLQCFNGGSCFLNARRQPKCRCQPRYT
SEQ ID NO:633 FTGPKCTQQVCAGYCANNSTCTVNQ

SEQ ID NO:634 AADGSRQCRCTAYFEGSRCEVNKCSRCLE
SEQ ID NO:635 CSNGGSCTMNSKMMPECQCPHMTGP
SEQ ID NO:636
VFWYKRRVQGAKEGFQHQRTNGAMNVEIGNPTYKMYEGGEPDDVGGLLDA
SEQ ID NO:637
CFLNARRQPKCRCQPRYTGDKCELDQCWEHCRNGGTCAASPSGMPTCRCP

FUS (526)

SEQ ID NO:638 MASNDYTQQATQSYGAYPTQ
SEQ ID NO:639 PGQGYSSQSSQPYGQQSSYSG
SEQ ID NO:640 YSQSTDTSYGQSSYSSYGQ
SEQ ID NO:641 SQNTGYGTQSTPQGYGSTGG
SEQ ID NO:642 YGSSQSSQSSYQSSYPGY
SEQ ID NO:643
TGYGTQSTPQGYGSTGGYGSSQSSQSSYQSSYPGYGQQPAPSSTSGSY
SEQ ID NO:644
MASNDYTQQATQSYGAYPTQPGQGYSSQSSQPYGQQSSYSGYSQSTDTSYG

FUS (525)

SEQ ID NO:645 MASNDYTQQATQSYGAYPTQ
SEQ ID NO:646 PGQGYSSQSSQPYGQQSSYSG
SEQ ID NO:647 YSQSTDTSYGQSSYSSYGQ
SEQ ID NO:648 SQNSYGTQSTPQGYGSTGGY
SEQ ID NO:649 GSSQSSQSSYQSSYPGYG
SEQ ID NO:650
NSYGTQSTPQGYGSTGGYGSSQSSQSSYQSSYPGYGQQPAPSSTSGSY
SEQ ID NO:651
ASNDYTQQATQSYGAYPTQPGQGYSSQSSQPYGQQSSYSGYSQSTDTSYG

Of NCOA2 Interactors

XE169

SEQ ID NO:652 DTKFLCPLCMRSRRPRLETI
SEQ ID NO:653 LLVALQRLPVRLPEGEALQC
SEQ ID NO:654 PEEPPNYPAAPASDPLREGS
SEQ ID NO:655 LPQLTGPVLELPEATRAPLE
SEQ ID NO:656 EELMMEGDLLEVTLDENHSI
SEQ ID NO:657
VRLPEGEALQCLTERAISWQGRARQALASEDVTALLGRLAELRQRLQAEP
SEQ ID NO:658
DTKFLCPLCMRSRRPRLETILALLVALQRLPVRLPEGEALQCLTERAISW

NAG4

SEQ ID NO:659 QDYPYVMADSLLDVLTGGH
SEQ ID NO:660 MSLPEDEGHTRTLDTAKEME
SEQ ID NO:661 IFQKKLDETTRLLRELQEAQ

SEQ ID NO:662 PPNMICLLGPSYREMHAEQ
SEQ ID NO:663 TPGDIVSTYGVRKAMGISIP
SEQ ID NO:664
MSLPEDEGHTRTLDTAKEMEITEVEPPGR LDSSTQDR LIALKAVTNFGVP
SEQ ID NO:665
IFQKKLDETTRLRLRELQEAQNERLSTRPPPNMICLLGPSYREMHAEQVT

ESRRA

SEQ ID NO:666 VAGGPRKTAAPVNALVSHLL
SEQ ID NO:667 VEPEKLYAMPDPAGPDGHL P
SEQ ID NO:668 AVATLCDLFDREIVVTISWA
SEQ ID NO:669 KSIPGFSSLSLSDQMSVLQS
SEQ ID NO:670 VWMEVLVLGVAQRS LPLQDE
SEQ ID NO:671
VAGGPRKTAAPVNALVSHLLVVEPEKLYAMPDPAGPDGHLPAVATLCDLF
SEQ ID NO:672
IPGFSSLSLSDQMSVLQSVWMEVLVLGVAQRS LPLQDELAF AEDLV LDEE

CTNNB1

SEQ ID NO:673 LHYGLPVVVKLLHPPSHWPL
SEQ ID NO:674 VRAHQDTQRRTSMGGTQQQF
SEQ ID NO:675 QLLYSPIENIQRVAAGVLCE
SEQ ID NO:676 IEAEGATAPL TELLHSRNEG
SEQ ID NO:677 GALHILARDVHN RIVIRGLN
SEQ ID NO:678
QRRTSMGGTQQQFVEGVRMEEI VEGCTGALHILARDVHN RIVIRGLNTIP
SEQ ID NO:679
CELAQDKEAAEAIEAEGATAPL TELLHSRNEGVATYAAAVLFRMS EDKPQ

CIT

SEQ ID NO:680 SKIDWNNIRNSPPPFVPTLK
SEQ ID NO:681 YSKALGILGRSESVVSG LDS
SEQ ID NO:682 EVEAVLSQKEVELKASETQR
SEQ ID NO:683 DIREQSRKLQEIKEQEYQAQ
SEQ ID NO:684 RKATECQHKLLKAKDQ GKPE
SEQ ID NO:685
IRQAKERAERELEKLQNR EDSSEGIRKKLV EAEERRHSLENKV KRLETME
SEQ ID NO:686
IQTKSQIQQMADKILELEEKHREAQVSAQHLEVHLKQKEQH YEEKIKVL

HSBP1

SEQ ID NO:687 MSLFDLFRGFFGFP GPRSHR
SEQ ID NO:688 FGFGFSFSPGGGIRFHDNFG
SEQ ID NO:689 EGQTLRDSMLKYPDS HQPRI
SEQ ID NO:690 TREDNDLDSQVSQ EGLGPVL
SEQ ID NO:691 TRHEADSSPRGDPES PRPPA

SEQ ID NO:692

PKSYFKSISVTKITKPDGIVEERRTVVDSEGRTE TTVTRHEADSSPRGDP

SEQ ID NO:693

EEGGSWRRGNPRFHSPOHPPEEFGFGFSFSPGGGIRFHDNFGFDDLVRDF

ROCK2

SEQ ID NO:694 SKQIQQLESNNRDLQDKNCL

SEQ ID NO:695 LQDKNCLLETAKLKLEKEFI

SEQ ID NO:696 LAKVELEKRQLQERFTDLEK

SEQ ID NO:697 IYESIEEAKSEAMKEMEKKL

SEQ ID NO:698 QKDVLNEDVRNLTLKIEQET

SEQ ID NO:699

ERRDRTHGSEIINDLQGRICGLEEDLKNGKILLAKVELEKRQLQERFTDL

SEQ ID NO:700

SQQKINELLKQKDVLNEDVRNLTLKIEQETQKRCLTQNDLKMQTQQVNTL

TILP(392)

SEQ ID NO:701 LKVLNEQLQSKEVELLQLRT

SEQ ID NO:702 KECSDLKIELQKAKQTDPYQ

SEQ ID NO:703 AELLRKLKTSTAIKKACAPV

SEQ ID NO:704 PLPGDVKVLSEKAILQSWTD

SEQ ID NO:705 AFGETKTKTLPLPNLPLHY

SEQ ID NO:706

ETQQVMRNLNPPSSNWEVEKLSCDLKIHGLEQELELMRKECSDLKIELQK

SEQ ID NO:707

STKLHLMNFTATYTRHPPLL PNGKALCHTTSSPLPGDVKVLSEKAILQSW

LRRFIP2a

SEQ ID NO:708 YMQGLKELKESLSEVEEKYK

SEQ ID NO:709 NEEKSKELERQKHMCSVLQH

SEQ ID NO:710 LWKDKKIGALEKQKEYIACL

SEQ ID NO:711 EPVAGAITVVSQEAQVLES

SEQ ID NO:712 NDGTVGDLAGLQNGSDLQFI

SEQ ID NO:713

LKEGLRQRDELIEEKQRMQQKIDTMTKEVFDLQETLLWKDKKIGALEKQK

SEQ ID NO:714

SAGEGPLDVRLRKLAGEKEELLSQIRKLKLQLEEERQKCSRNDGTVGDLA

PSAP

SEQ ID NO:715 SLQKHLAELNHQKQLESNKI

SEQ ID NO:716 PQDGPRSKPQPKDNGDVCQD

SEQ ID NO:717 CKNYISQYSEIAIQMMMHMQ

SEQ ID NO:718 PIKKHEVPAKSDVYCEVCEF

SEQ ID NO:719 NKTEKEILDADFDMCSKLPK

SEQ ID NO:720

MVTDIQTAVRTNSTFVQALVEHVKEECDRLGPGMADICKNYISQYSEIAI

SEQ ID NO:721

QKQLESNKIPELDMTEVVAPFMANIPLLLYPQDGPRSKPQPKDNGDVCQD

Of ER-beta and ESR1 Interactor

NOTCH2

SEQ ID NO:722 MPALRPALLWALLALWLCCA

SEQ ID NO:723 YCQHRDPCEKNRCQNGGTCV

SEQ ID NO:724 CHMLSRDTYECTCQVGFTGK

SEQ ID NO:725 TDVNECDIPGHCQHGGTCLN

SEQ ID NO:726 VNGGTCRQTGDFTFECNCLP

SEQ ID NO:727

TPAHALQCRDGYEPCVNEGMCVTYHNGTGYCKCPEGFLGEYCQHRDPCEK

SEQ ID NO:728

SGFTGEDCQYSTSHPCFVSRPCLNGGTCHMLSRDTYECTCQVGFTGKECQ